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A BIRD'S EYE
VIEW
OF THE
WORLD
BY
JESSE RECLUS

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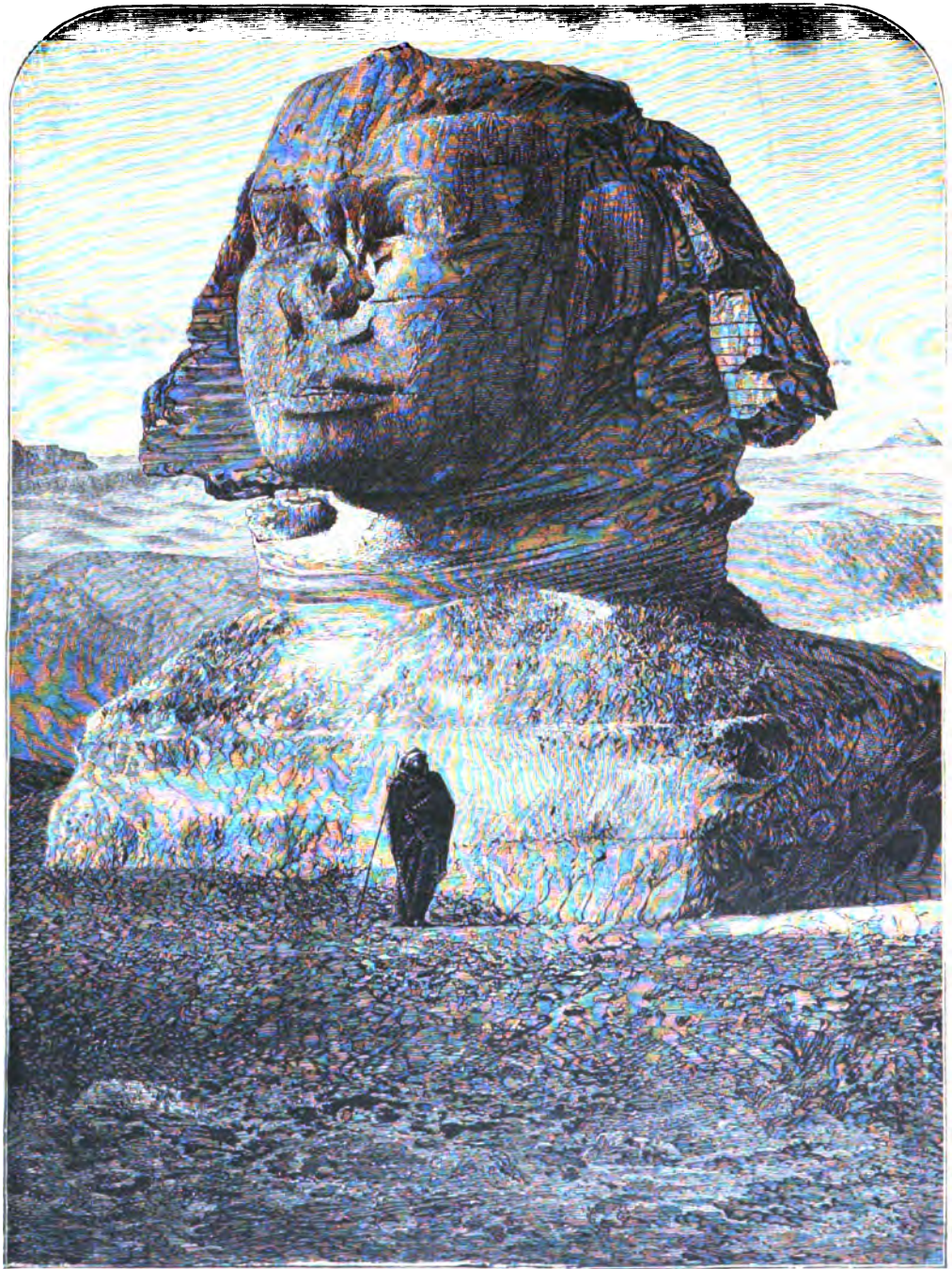
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To
Emile
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THE SPHINX.

A BIRD'S-EYE VIEW OF THE WORLD

A POPULAR SCIENTIFIC DESCRIPTION

OF

The Great Natural Divisions of the Globe

THEIR LAKES, RIVERS, MOUNTAINS, AND OTHER PHYSICAL FEATURES,
AND THEIR POLITICAL DIVISIONS

AND OF

THE PEOPLES THAT INHABIT THEM

THEIR GROWTH, DISTINCTIVE CHARACTERISTICS, LANGUAGES, AND
RELIGIONS, WITH DESCRIPTION AND POPULATION
OF ALL THE PRINCIPAL CITIES

BY

ONÉSIME RECLUS

THE FAMOUS FRENCH GEOGRAPHER AND SAVANT

TRANSLATED, EDITED, CORRECTED, AND BROUGHT DOWN TO DATE BY
MALVINA ANTOINETTE HOWE

WITH AMERICA (THROUGH THE UNITED STATES) REWRITTEN AND ENLARGED BY
FORREST MORGAN

THE WHOLE UNDER THE EDITORIAL SUPERVISION OF
CHARLES HOPKINS CLARK

OF "THE HARTFORD COURANT," ASSISTANT EDITOR OF "THE
HISTORY OF HARTFORD COUNTY," ETC.

With Six Maps and nearly Four Hundred Beautiful Illustrations.

BOSTON
TICKNOR AND COMPANY
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PREFACE.

AN eminent French critic has ascribed to the Reclus family "the gift of geography," and Onésime Reclus is only less famous in such science than his elder brother, Elisée, with whom he has been associated. Each has travelled widely and written much (both are contributors to the famous *Tour du Monde*), and each has read and studied with the zeal and enthusiasm of the true French savant. This "BIRD'S-EYE VIEW OF THE WORLD" is in one sense the result of the labors of both, for it was written by Onésime Reclus and is in a certain way an introduction to the "*Nouvelle Géographie Universelle*" of his brother—a publication of many volumes, which has occupied years in the preparation. He has therefore had this larger work as a source of information, but he has moved on entirely independent lines, writing his own book with his own pen, and giving it all the charm and flavor of his own personality.

This, however, is not a geography in the ordinary sense of the word, but a symmetrical description of the earth and its inhabitants, from the hand of a man who has the world—its past and its present—under his eye, and who possesses the power to present it as a whole to the view of his readers. Amid all the details concerning the smallest fragment of land or the pettiest tribe of men, the relationship to the great whole is never for a moment lost sight of. At the same time the arrangement of the matter is so rigidly systematic that it is as easily accessible as though it were put in the form of an encyclopedia. In these times of world-wide business, of multiplied means of communication, and of constantly increasing interest on the part of each individual in the whole world's affairs, questions are arising every day and many times a day for which the answer, if found at all, could only be reached after long search in various directions, and perhaps among conflicting authorities. But this volume meets the demand of the hour, and gives its information readily and accurately. Take up your newspaper of this morning, or of any other date, and look through its despatches for the peoples or the places that the news of the day brings for the moment into prominence, and then turn here for what you want to know of them. You will find it.

It is a book of fascinating interest, written with the masterly cleverness of the French scholar—charming in its style, informing in its contents, and astonishing in the breadth of its knowledge and the thoroughness of its investigation. It seems as if no one but a Frenchman, and he a Reclus, could have combined the industry to gather such a multitude of facts with the ability to weave what we call mere facts together in such a way as to

make them more interesting than a story. Indeed they are a story—the story of the world. The book is instinct with life, and it is picturesque and graceful at the same time that it is thorough and trustworthy as an authority.

The work has been translated into English with singular fidelity and consummate skill by Miss Howe, who has edited it with great care, bringing it down to date, and correcting such mistakes as are liable to occur in the first issue of any work so comprehensive and minute as this is. After such editing, it is safe to accept its statements as authoritative; for they are the result of skilled investigation sustained by subsequent verification. Miss Howe has also, for the convenience of American readers, substituted our common standards of measurement for the metric system, and has occasionally shifted the standard of comparison from some French subject, which the author's nationality made natural to him, to a corresponding English or American subject, which would come more naturally to the mind of the American reader. All these are changes that make the book more acceptable without altering it in any essential particular.

The subject of the United States, somewhat scantily treated in the original,—at least for a work to circulate here—has been rewritten and expanded by Mr. Forrest Morgan; from the beginning of America to the end of the United States the work is nearly all of it original with him.

No other book is like this. It is not an encyclopedia, nor a history, nor a geography; it is *all* of them. The encyclopedia has been sifted until only that is left which is wanted. History is given by its results: we have the peoples, the development of the distinctive characteristics of each out of the various elements absorbed by it since the dawn of history, we have their languages and religions, their cities and countries, their works and their ways. Geography we have too in the description of the physical features of the world, which are considered especially in their relation to life on the globe. All this information, industriously sought, carefully tested and proved, and brilliantly told, is made further attractive by nearly four hundred fine illustrations especially prepared for the work. The majority of these, selected as the best and most appropriate, have been procured from the original French engravings which belong to Messrs. Hachette et Cie of Paris, and imported at great expense especially for this book; to these have been added a large number of others, supplementing and extending the list of subjects, making in the whole a gallery of appropriate illustration unrivalled elsewhere for variety and completeness.

CHARLES HOPKINS CLARK.

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ARID SPAIN.

A BIRD'S-EYE VIEW OF THE WORLD.

THE EARTH, THE SEAS, RACES OF MEN

Insignificant Size of the Earth. — Man is born and lives on a nearly round ball which seems to him immense; then this ball, this globe, the earth, whose offspring he is, takes him back into her vast bosom. For a long time we thought that the earth was the centre, the end, and the cause of all things. To the barbarians, whose descendants and proud heirs we are, our globe filled the universe. The sun was a “light to our feet”; the moon, a “lamp to our path”; and the stars, twinkling sparks in the vault of heaven.

And man, who thought the earth so large, had not seen even the half of it. He talked vaguely of a lost Atlantis; but the two Americas, Australia, Oceanica, and almost all of Africa, were unknown to him. So, in our day still, many an islander limits the world to two or three archipelagoes, many a savage confines it to the valleys where a few wretched tribes hunt.

We know now that the earth is pitifully small. Were it twelve hundred fifty thousand times greater than it is, it would be no larger than the sun, which is itself

but a grain of sand. With the moon in its train, the earth whirls in an ellipse around the sun; the sun, with its attendant planets, hastens through infinite space toward a star in the constellation Hercules; and this star speeds toward another star. Twelve hundred fifty thousand times smaller than the orb from which it receives light and life, our paltry ball has an area of one hundred and ninety-seven million square miles.

Man, the ruler of the earth, does not yet know the mysteries of his realm, and he never will wholly know them. Though he succeed in surprising the secrets of the forests, of the fens, of the deserts, will he ever reach the two poles? And how many glaciers enshroud mountains so lofty that human lungs cannot breathe upon them! Gaurisankar, in the Himalayas, in India, towers 29,002 feet above the sea. Down to the present day this has passed for the highest point on the globe, but two neighboring peaks are apparently still higher.¹

With the exception of the icy polar void and mountain tops two leagues above the ocean, we shall soon know how the earth is made; and before long we shall have under the plough every spot that can bear a stalk of grain. In three or four generations the year 2000 will dawn on men dismayed at the sight of exhausted continents, worn-out islands, rivers run dry, forests consumed—the world ripe, and famine at the gates. The planet will be old, but, more than that, it will be mutilated. Our hands are guilty; we smite our mother earth. The woodman's axe not merely fells the trees, it levels and destroys the mountains; and every branch that falls takes a drop out of the springs.

When we shall have cut down, cleared, or burned everything; planted, irrigated, or drained every spot of land, we shall then have subdued but little more than a quarter of our planet, for more than two-thirds of its surface is water. Follow the tiny silver thread from any spring, however humble, from rill to brook, from brook

¹ This statement is based mainly on the observations of the noted English mountaineer, Mr. W. W. Graham, who saw the two peaks referred to, in the fall of 1883, from the lower summit of Kabru, 23,700 feet above the sea. We quote his description of them, from a paper read before the Royal Geographical Society: "North-west, less than 70 miles, lay Mount Everest, and I pointed it out to Boss, who had never seen it, as the highest mountain in the world. 'That it cannot be,' he replied; 'those are higher'—pointing to two peaks which towered far above on a second and more distant range, and showed over the slope of Everest, at a rough guess, some 80 to 100 miles farther north. I was astonished, but we were all agreed that, in our judgment, the unknown peaks, one rock and one snow, were loftier. Of course, such an idea rests purely on eyesight; but, looking from such a height, objects appear in their true proportions, and we could distinguish perfectly between the peaks of known measurements, however slight the differences. It has been suggested to me since that we mistook Mount Everest; but this is impossible, for just here occurs the remarkable break in the chain, and there is no snow range at all between Kabru and the group of Mount Everest."

Lieutenant-Colonel H. C. B. Tanner, S. C., of the Indian Survey, in his Narrative Report, issued about a year since by the Surveyor-General for India, makes the following remarks in regard to these summits: "Where nearly everything is absolutely unknown, it is futile to discuss the probabilities of there being higher mountains than Everest or not. Native information on the subject of heights is quite untrustworthy; and, as no European has been in a position to obtain any direct knowledge of the immense mass of snow mountains that exist between Everest and a point 80 miles to the westward, and again for 50 miles to the north, what man will be bold enough to hazard an opinion on the subject."

Mr. D. W. Freshfield, commenting in the *Alpine Journal* for February, 1886, on Colonel Tanner's report, thus defines the position of the question at that date: "No observer competent to fix absolutely the elevation of its summits has seen the region north of Gaurisankar. Five persons only, competent to report at all, have lately seen it, namely, Pundit No. 9, Babu 'S. C. D.,' and Mr. Graham, with Herr Boss and Kaufmann. These five all agree that it contains mountains of enormous height, which the Babu says the natives believe, and the climbers say they believe, are higher than Gaurisankar. The value of the climbers' belief depends entirely on their capacity to recognize Gaurisankar. This Mr. Graham asserts, but the Survey officers generally deny."—ED.

to river, and you will always come to the wide ocean, which, as the Norwegian poet says, "is forever journeying to meet itself," and, never weary, is ever destroying and ever building anew.

The solid land, with its waters stagnant and in motion, extends over 52½ million¹ square miles, while the seas cover 144½ million.²

That is, the land of the globe embraces an area more than seventeen times that of the United States.³ We must not infer, however, that the capacity of the earth for population is seventeen times greater than the capacity of the United States, for there are immense tracts on its surface which seem destined to defy forever the



RAINY SPAIN.

impatience and the avarice of man. They remain uninhabited. Some, vast and boundless, sleep beneath the ice; others, boundless also, are furnaces which the sun each day heats afresh.

Sea and Rain, Sun and Climate. — If there are burning zones on the earth which are hopelessly sterile, the sun is not alone to be blamed for it. The rain is his accomplice: with it he creates, without it he devours. The more directly his rays fall on a region, the more he burns it and penetrates it; the richer and more prolific is the soil if the rain also penetrates it.

¹ Exactly 52,542,743, one twenty-fourth of which is in islands. (In reducing areas the square kilometre has been taken as equivalent to 0.3861167 square miles. — Ed.) ² Exactly 144,407,646.

³ Wherever the United States has been used as a modulus the area has been assumed as 3,000,000 square miles (excluding Alaska) and the population as 60,000,000. — Ed.

From the Pacific, from the Atlantic, from the Indian, from the Antarctic, from all the seas great and small, vapors rise which gather in clouds and are drifted by the winds to the coasts. Clouds are the rain on its march. The lands over which these masses of vapor are frequently rent teem with tufted trees and savory fruits. Not so, however, those regions where moist breezes rarely blow, such as Aragon, the plateau of Leon, Castile, La Mancha, and Estremadura, the steppes of the Atlas Mountains, the Sahara, Southern Africa, Arabia, Persia, Central Asia, the plateaus of the Rockies, the desert of Atacama, the Pampa of Tamarugal, half of the Argentine Republic, three-quarters of Australia; and, in all parts of the globe, the plateaus that are shut off from the sea, and the valleys so guarded that the moisture-bearing clouds never reach them.

No matter how lofty a mountain is, it cannot obstruct the sun's rays for an entire day or year, but a very low elevation can bar out nearly all the rain. The traveller who has crossed from *Tras-os-Montes* to *Entre-Douro-e-Minho* is aware of this. In *Tras-os-Montes*, which is a continuation to the west of the high plains of Valladolid and Zamora, he sees parched earth, naked hill-sides, fulvid skies, arid valleys, and waterless river-beds; and, after suffering all day with the heat and dust, he not unfrequently finds himself at night exposed to a biting cold. As soon as he has crossed the low mountains, and especially when he is beyond the *Serra de Marão* (4665 feet), he descends toward *Amarante*, into a delightful region of freshness, splendor, and beauty, with running water and thousands of crystal springs. Hundreds of similar examples might be cited. The contrast is more striking still between *Oviedo*, *Gijon*, or *Santander*, and the *llanuras*¹ of Leon, or between the verdure of *Béarn* and the thirsty rocks of Aragon. In Great Britain the rainfall is five, six, or even ten times less on the eastern slope than on the western; in Norway it is five, six, or eight times greater on the coast than on the high, wintry, mountain-girt plateau. There are few countries, however small, where a *Serra de Marão*, oftentimes nothing more than a chain of hills, does not distribute the moisture with baleful partiality, lavishing it on the valleys near the sea, but withholding it from the plains of the interior. The wholly rainless districts are barren tracts, where man neither sows nor reaps; but, in regions visited by the rains, vegetation springs up in proportion to the amount of water received.

The different forms of plant life depend upon the directness of the sun's rays, and the duration of the period of illumination. The sun regulates the zones of cultivation. In the extreme north, notwithstanding the length of the days, it is impossible for the oblique rays to melt the snows heaped up for hundreds of leagues about the pole; so only mosses, lichens, dwarfed shrubs, and stunted trees grow in the frigid zone, which is called in the north the Arctic, in the south the Antarctic. But, moving southward, we find nature becoming fruitful in measure as the sun's rays lose their obliquity, and in measure as the inequality in the length of the days and nights lessens. From the frigid we enter a cold zone, where superb trees, such as birches, pines, firs, and larches, are massed in majestic forests. These woods are not, like those of the tropics, a wild tangle of fantastic shapes, an inconceivable profusion of climbing plants, of intertwining trunks and boughs, of pendent branches and parasites, where a mortal conflict is forever waging between the species, and where a frenzied struggle goes on unceasingly for air and light. No enemy assails the tree of the north, no living cord stifles it. It preserves its outlines and its independence. The sunlight glints through the stately avenues of its forest home, while

¹ Plains.



THE GREAT DUNES OF THE SAHARA.

in the Selvas of South America one is imprisoned in a maze of mad vegetation. With their pillar-like trunks, their leafy vaults, their sombre light and vast silence, the northern forests have something of the architecture and the serenity of temples. They are more majestic than the tropical wood, where all order disappears under the draperies and hangings. Autumn strips them of their leaves every year, after having decked them out in the gayest colors, but neither autumn nor winter can pluck the needles from the evergreens. Every branch on the dusky pines or firs in the rigid forest bends under the whiteness of the snows.

So, almost at the moment of quitting the realm of perpetual frosts and of trees gnarled by the ice and the night, we enter a zone where already the sun gleams on huge trunks and grand woods, on ripening grain and green meadows. From the cold temperate zone we pass into the warm temperate, the glory of which is the vine; the oak, linden, ash, beech, elm, chestnut, and poplar thrive here side by side with the evergreens of the north.

With the olive-tree, then the orange, then the palm, we enter the warm zone, which is that of Cannes, or Menton, in France, of Naples in Italy, of Cadiz in Spain, of Algiers in Africa, of Carolina, and of Florida. Exempt from the cold of the north, the fogs of the temperate countries, the typhoons and tornadoes of the tropics, this is the most beautiful and the most favored part of the globe, — a veritable pleasure-garden — especially along the shores of that Mediterranean where Europe, Asia, and Africa meet.

The torrid zone follows the equator around the globe, and stretches from the tropic of Cancer on the north to the tropic of Capricorn on the south. Its fruitfulness is due to the abundance of the rains borne thither by the regular winds, and to the heat of the sun, whose rays, becoming more and more nearly direct as one approaches the equator, at length fall vertically on the soil. The heat and moisture evoke a marvellous excess of life in the gigantic forests, where every tree has its lianas and parasites, its multi-colored birds and grinning monkeys. Here roam the most graceful and the most powerful beasts of the earth; here the most venomous serpents glide; here innumerable insects, man's invincible enemies, buzz, fly, or hop, and bite or sting. Mankind here bears the penalty of the splendors of a moist, hot climate. The black or red inhabitants of the torrid zone are a sluggish herd. As for the whites, they grow old there very speedily.

Influence of Altitude. — The universal climates, namely, the frigid, the cold, the temperate, the warm, and the torrid, depend upon latitude. But within the very precincts of these great zones, local climates of endless varieties are created by the elevation of the surface.

As one ascends above sea-level, he feels the air first growing cool, then cold, then icy. According to the exposure to the sun, or the nature of the soil, according to thousands of local circumstances, three hundred, three hundred fifty, four hundred, or four hundred fifty feet of altitude determine a depression of one degree Fahrenheit in the mean annual temperature of a site;¹ at the same time, the climate of the higher places is singularly more changeable than that of the lower; it is much more capricious; it is subject to greater extremes of heat and cold; and it varies more according to the time of the day or the season of the year.

At the Peruvian hacienda of Antisana, the mean annual temperature is nearly the

¹ In reducing temperature observations for height, one degree for every three hundred feet is generally adopted. In the present state of our knowledge, this or any other estimation is at best no more than a rough approximation, since the law of decrease, through its variations, requires yet to be stated; being, in truth, one of the most intricate and difficult problems of climatology awaiting investigation at the hands of meteorologists. — ALEX. BUCHAN, *Art. Climate*, *Enc. Brit.*

same as that of Saint Petersburg. Now, the city of winter palaces gazes on the sky of the 60th parallel north latitude, and the Andean farm-house contemplates the dome of the equatorial heavens; but Saint Petersburg is at the level of the sea, while the Peruvian dwelling is nearly 13,500 feet above the oceans. Many a mountain has its shoulders under the eternal snows; whilst in valleys so close to the summit that the eagle, the vulture, and the condor descend into them by a few wing-strokes, the warm winds and hot suns make the year one round of spring and summer. In the extreme north, where the very sea-coasts freeze, the effect of altitude is hardly perceptible; but in the temperate zone its influence is apparent to even the dullest observer. At the equator, ascending one hundred feet is equivalent to going twenty to twenty-five miles north or south at ocean-level. Under the tropics the white man finds freshness and coolness at an elevation of sixteen hundred feet; or, better still, at three thousand, in the shade of trees many of which are unknown in the lowlands. At sixty-five hundred feet he breathes the air of groves where the vegetation of Europe becomes acclimated as readily as himself. At ten thousand he inhabits delightfully tempered valleys. At thirteen thousand he suffers from the cold. At sixteen thousand to twenty thousand, life would be impossible. At twenty-two thousand to twenty-five thousand he would perish (could he climb to such heights) amid the polar horrors that so many feet of altitude have spread out among all the glories of the torrid zone, and which he could reach at sea-level only by journeying a quarter of the way round the globe.

The earth gains wonderfully in variety through this power exercised by the mountains, of superposing climate on climate, of piling plant above plant, from the most delicate to the most hardy. Every lofty mountain within the tropics, every mediocre mountain of the temperate zone becomes a little earth of itself, possessing all, or nearly all, the climates. France, for example, lying midway between the equator and the pole, sees beautiful palm-trees reflected in the blue waters of the Provençal coves, at the base of Alps where glaciers crumble on lakes seamed by an infinite, eternal winter.

Geographical Provinces. — The prevalence of winds and rains, nearness or remoteness of the sea, distance from the pole or the equator, massing of the mountains, nature of the soil and subsoil, — all these constitute the Geographical Province.

The aspect and character of a country are affected by the properties of the soil and subsoil almost as much as by latitude, altitude, and the rainfall. A country where the soil is porous and dry has no likeness to one with an impervious, wet soil, with abundant springs, lakes, winding rivers, swampy woods, and damp meadows. A granite region is wholly unlike a limestone or chalk region. It never produces the same species of plants, nor the same men; and with the lapse of centuries a country may transform an adopted race. Who will ever find in the man of Roscoff or of Douarnenez a resemblance to the vine-dresser of the Gascon hills, or to the fisherman of La Cornice, or the sunburnt Saharan, or the Brazilian Portuguese, or the Indian who rears his hut on the banks of the mightiest of rivers.

Soil and climate have made a motley family out of the inhabitants of the globe; a family which feels its oneness only because of the common possession of articulate speech, and possibly also of what may be termed the ideal faculty. Race fusions aside, time alone can diminish — we dare not say obliterate — these extraordinary differences. If the *milieu* transforms, it does it only with the aid of the ages. Our experience has been too brief to determine whether it is possible to

make a Lapp out of a Frenchman, or an Iclander out of a negro. We are ignorant, short-lived, poor, and insignificant; we count our years by tens, the age of our nations by hundreds, while thousands upon thousands of years are but as a moment for the earth, transient as it too may be with its satellite, its sister planets, and its sun.

The earth and the sea give life to five hundred thousand species of plants, and to three hundred thousand species of animals. Shall we be compelled to repeat the list of the quadrupeds, the birds, the insects, the trees and the flowers of each country? Can the same vegetation spring up under Irish skies and in "the yellow immensity which Tuggurt and Biskara prick with white stitches"? The northern countries, and those septentrionated by their altitude, produce the vegetation of the north; the temperate zone has the plants which the temperate climate calls into being or tolerates; the torrid zone has those of the tropics, except in the lofty mountains, where are outspread, on successive terraces, the herbs and trees of the temperate, the cold, and the polar zones. And, now that every country is naturalizing all the plants possible to its climate, Vergil's prediction, "*Omnis feret omnia tellus*," is fulfilled. Since the days of Christopher Columbus, Europe has sent one hundred fifty or two hundred different species of plants to America, and has received in return more than sixty. Almost all the cereals and the fruit-trees of Europe are said to have been introduced from Asia.

But poisons and pestilences are also disseminated at the same time with precious woods, savory fruits, and tonic juices. It is not around the Gulf of Mexico and in the Antilles alone that yellow fever terrifies the pale brood of men; it ravages Brazil to-day, it passes over Rio every year like the destroying angel, and even reaches the once healthful country of La Plata, where already it has more than once caused the prayers for the dying to be recited in thousands of dwellings; it has visited Lisbon, and it will yet strike St. Nazaire. The cholera, bred first in Bengal, is often Europe's guest; who will rid her of this livid stranger when the net-work of railways has welded all its meshes from the Rhine to the Ganges? Every rail joined to another rail on the way to the east brings her nearer to the hot and miry abode of this the greatest devastator generated by Asia.

Number of Mankind.—Civilization and Colonization.—Injustice of the Strong.—Acclimatization.—The population of the globe is estimated at 1480 million. These figures are probably correct within one hundred million.¹

¹ The statistics of population in this work are from the most authoritative sources. Those of towns are taken from the latest census returns or from trustworthy estimates. All others, except in the case of certain divisions for which more recent official figures are available, are from Wagner and Supan's *Die Bevölkerung der Erde*, VIII., Petermanns Mittheilungen, "Ergänzungsheft," No. 101, Aug. 1891. The following table gives some of the general results of Drs. Wagner and Supan's careful compilations:

DIVISIONS OF THE GLOBE.	Area in Sq. Miles.*	Population.	Density per Sq. Mile.
Europe (without Iceland, Nova Zembla, etc.) .	3,756,862	357,379,000	95
Asia (without Polar Islands)	17,044,217	825,954,000	48
Africa (without Madagascar, etc.)	11,277,349	163,953,000	14.5
The Americas (without Polar Regions)	14,801,436	121,713,000	8
Australia (including Tasmania)	2,971,448	3,230,000	1
Oceanic Islands	733,120	7,420,000	10
Polar Regions	1,730,814	80,400	—
Total	52,315,247	1,479,729,400	28

* Area statistics in the text are mainly those adopted by Emile Levasseur.

How did man, at first so puny and so poorly armed, win the earth over animals with huge claws, sharp teeth, and ever ready weapons? How did he vanquish the felines, stronger, handsomer, better clad, and more supple than himself? We are ignorant of



THE WHITE RACE.

the story of this conquest; we only know that man was more intelligent than the other beasts of prey. And how is it that the human race has not annihilated itself since in warfare, slaughtering for the sake of slaughter? How many times the charnel-

house has been filled in battle! And how many more times it will be filled! Yet, in spite of arrow, pike, and lance, in spite of shot and shell, in spite of pestilence, and fever, and debauchery, in spite of himself, man is more vigorous to-day than ever before; he is overspreading the entire globe. Not the whole race, but certain of its families, especially the whites of Europe, on whose banner is written: "Take, kill, and eat!" The Europeans and their American descendants are driving the small peoples to the shambles or to the hospital. Every day sees a tribe, a language, a myth, an idea, obliterated.

Thus we colonize, thus we civilize!

But, though the idea, the myth, the dialect of a people be blotted out, the death of the people itself is only in appearance. A race never becomes wholly extinct, and it is very rare that even the pettiest tribe is completely effaced. Its language is swept away, its names are replaced by those of foreigners, its altars are overturned, its laws forgotten, but the soul of the tribe survives with the blood of its most powerful families. If the soldier, the adventurer, the hunter, law and poverty, leave never so little of vigor to a few of the vanquished, these penetrate in their turn into the victorious race, sometimes by lawful marriages, but more often by chance unions. The half-castes springing from these alliances cling tenaciously to the native soil, they grow up more robust than the children of the conquerors, and, at length, the nation which was thought to be extirpated has its roots ineradicably fixed in the motherland. Among the Anglo-Saxons, who of all the exterminating nations are least inclined to ally themselves with their savage victims, not a single people has in fact perished. The Indians still live in numberless white homes in the United States, and the day when it shall be said that the last Red-skin has expired, that day the blood of the Six Nations and of scores of other apparently lifeless tribes will be coursing in the veins of thousands of families who boast of their English ancestry. Even the Tasmanians, scrupulously butchered to the last individual, have left half-breed descendants dispersed through Australia.¹ It sometimes happens in America, in Africa, Asia, Oceanica, or even in Europe, that there suddenly appears in a family supposed to be of pure blood a child of singular visage, the offshoot of some seemingly dead nation. By his birth, this child protests against centuries of injustice. The *superior* nation had forgotten betrayed hospitalities, violated oaths, blazing forests, men drowned, women massacred, children brained against the walls, and history was mute; "but," we read in Holy Writ, "if these hold their peace, the very stones will cry out." This sure though hidden survival of races rids the world's history of some of its bitterness. Moreover, in plundered and down-trodden countries the despoilers often suffer more than the despoiled, and this very suffering establishes for them a right to the soil; when the cemeteries of the conquered territory have been filled with the bodies of their colonists, they have acquired the right to call it native land.

Acclimatization is always accomplished with difficulty, however little the old country of the settlers may differ from the new; they subjugate the strange soil slowly and painfully, laying under the sod generations of men who have died without

¹ In 1835, the English of Tasmania (then Van Diemen's Land) determined to rid the colony altogether of the natives. They organized a regular *battue* in the island, and all the Tasmanians were soon exterminated, with the exception of 210 individuals, who were transported to a small island in Bass's Strait. This paltry remnant of a race which once occupied a territory nearly as large as Ireland, perished rapidly. Count Strzelecki visited them in 1842; he found only 54 remaining. Within seven years and a few months, only 14 children were born. — Ed.

tasting the fruits of life; for invisible poisons are exhaled from the land which bore the dispossessed natives, from the air they breathed, from the water they drank, from the mountains that hid their hamlets or their caves. The French are unable to resist for any length of time the climate of Senegal, of Gaboon, of Cochin China, or of Guiana; it is impossible for the English to live in Sierra Leone, and they suffer in India; the Dutch complain of Batavia; the few Negroes, Anamese, Hindus and Javanese who emigrate to Europe soon succumb to the effects of the European climate. It is the same with the brute creation. That gayest of animals, the equatorial monkey, ceases to gambol in the cordage of the ship as soon as he has passed the tropics; then he grows restless, submissive or vicious, becomes rheumatic and phthical, and to the cruelties of physical disease is surely added homesickness for his brilliant tropical forests.



THE BLACK RACE.

Certain nations adapt themselves more readily than others to climatic changes. This innate vigor is due either to their mixed origin or to the fact that their ancestors have dwelt for centuries under skies midway between torrid and temperate. These cosmopolitan nations are the Jews, the Spaniards, the Portuguese, the Arabs, and the Chinese. This last people is gradually invading all Asia, the Malay Archipelago, the isles of the South Sea, and, if left to itself, it would overspread the two Americas.

Races of Mankind.—The human family has been variously classified by anthropologists, but in general we recognize a White race exhibiting two well defined types, the dark and the fair, with all degrees of mixture. The Arabic or Semitic race is ranked with the Whites or Aryans, except by those who regard it as a humanity

apart. Then follow the Yellows or Mongolians, who include the Chinese, and constitute about one-third of the entire population of the globe; the Polynesians, the Papuans, the Negroes and Negroids; and lastly the Indians, or Red-skins.

Any attempt to classify mankind into a number of permanent races, no matter what criterion of distinction is adopted, encounters insuperable difficulties.

The origin of the races and their ties of kinship present a labyrinth through which our ignorance strays, with no hope of release. What voice could summon it into the light, since history is silent and since nothing is left to us but the obscure language of a few scraps of legend and a few mouldy bones crumbling to dust?

The races are so mixed to-day that it is impossible to disentangle the threads of human relationships. Even among those who proclaim most loudly their spotless origin, how many men of pure blood are to be found? Are the different languages which we hear, spoken by the legitimate sons of a people, or by its bastards, by those assimilated from a foreign race, or even by conquered foes? Could any one say to a Frenchman taken hap-hazard out of a hundred thousand: "I see what peoples you sprang from; I see from what different races the blood of your veins is drawn"? Who would think of classifying the Blacks of Hayti and the Hurons of Lorette in the French family? And yet both nations speak the language of France.

The word *race*, such as it has passed into current speech, has, then, no absolute signification, whether it designate one of the larger groups of mankind, as in the term "White race," or simply one of the lesser families, as in the expression "English race." Even among its pure representatives, the stock of the so-called White race has been deeply penetrated by Yellow, Red, and Black elements, while the English race, which is composed of all sorts of heterogeneous parts, is still undergoing transformation before our very eyes, through countless foreign contributions.

The White or Aryan race is the dominant race of the world. It covers Europe and is rapidly spreading over northern Asia, northern Africa, southern Africa, the two Americas, Australia, New Zealand and the islands of the South Sea; its various branches speak tongues having a common origin, all of which are dignified by splendid literatures. The other races all marvel at its inventive genius, all dread the range of its fire-arms, all covet its fortune, all beg its gold. It is carrying *civilization* into every corner of the earth and at the same time it is disseminating the maxims of an insolent commerce, the love of gain, scorn of the weak and the poor, thirst for luxury and the pest of drunkenness. It bears war and peace in the folds of its mantle, and its peace is more desolating than its war. These colonizers of the globe, these exploiters of the world, these professors of all good and all evil, these apostles and these devourers, number at the least, including their Semitic brothers or cousins, 550 million souls: in this estimate we ignore the fact that millions of Whites, especially in America, are only nominally Whites as they are descended from Reds or Blacks rather than from Aryans.

The Semites are less numerous and less prolific than true Aryans; they inhabit Arabia, portions of anterior Asia, the Egyptian and Nubian Nile-lands and northern Africa; and their rule if not their race is daily pushing farther and farther into central Africa. By means of the Arabic tongue, the language of Islam's sacred book, through Moslem proselytism, slave-hunting, massacre and ruin, they have made great gains over the Blacks and Negroids of the dark continent; but in the African Tell, one of their richest countries, they are retreating before the French, and the Europeans are gradually wresting the entire Mediterranean from them.



THE YELLOW FACE.

The Jews, who are closely allied to the Arabs, are the least mixed of all the tribes of earth (and this notwithstanding the beauty of their women), for the reason that they never intermarry with other peoples. This branch of the so-called Semitic race is daunted by nothing; it is rapidly augmenting its power, in every quarter of the world, it is filling its coffers with riches compared with which the treasures of Cræsus would be poverty itself. The Jews are estimated to number not more than seven million, but in wealth they rival all the rest of mankind. Among these seven millions are included many who are Jews in religion, in business capacity, in the characteristic qualities and gifts of the race, but who are of non-Israelitish origin. On the other hand, many of the Christians are of Hebrew descent.

The Yellow or Mongolian race, more than 500 million strong, swarms in eastern Asia. It disputes the empire with the Whites, not by means of a superior genius, but through its numbers, its practical wisdom, its patience, and the limited range of its wants. The Mongolians resist tropical temperatures better than the Whites; they labor at cheaper rates, and give their time and toil less grudgingly. The Chinese constitute nearly a fourth of the human race, and all the other Mongolian peoples are their satellites.

The Blacks and Negroids, Malays, Polynesians, Papuans, and Red-skins, though numbering more than 400 million, recognize, willingly or unwillingly, the terrible ascendancy of the Whites. The Blacks and Negroids have their home in Africa, but for the last three or four centuries they have inhabited America also. They were formerly transported thither as slaves, shackled and crowded into the holds of ships, with the ocean beneath for the recalcitrant, the sick, the dead, and for the whole cargo in case it became necessary to lighten the vessel's burden. They have not the inventive wit of the Whites, nor the quiet, laborious wisdom of the Chinese; but natural gayety, enjoyment of life, kindliness, exuberance, fecundity, power of resisting heat and the poisonous exhalations of marshes, all guarantee a long existence to this much slaughtered race. Brazil, the most favored region under the sun, is, in reality, peopled by Negroes and Mulattoes, though nominally it belongs to the Portuguese Whites. The Indians, or Red-skins, are dying out before the Whites. Their blood has been fused with that of the Castilian-speaking inhabitants of America as the blood of the Blacks with that of the Portuguese. The Malays, who are subject to the Europeans, are being overrun by the Chinese. The Papuans, or Melanesians, are steadily decreasing. The Polynesians, or Kanakas, after having dwindled until they were supposed to be extinct, are gradually reviving, and are allying themselves with the Whites. They are a handsome people, the women especially, and charming insular tribes may result from these marriages.

Religions of the World. — Men are born in the bosom of societies whose language they unconsciously learn, and whose religion they adopt without question. Many a fervent Mohammedan votary of the One God, in other circumstances would have worshipped still more devoutly the divinities of the Pantheon of India; many a Hindu who piously throws himself under the wheels of Juggernaut was born rather to bow his head before Allah.

The distribution of the different religions among the inhabitants of the globe is approximately as follows: 450 million Christians, 7 million Jews, 175 million Mussulmans, 650 million Buddhists and Brahmanists, 200 million Idolaters and Pagans.

Continents and Divisions of the Earth. — The 1480 millions of mankind, fair or dark, chestnut-colored, copper-colored, bronzed, dusky or jet black, yellow or yellowish, red

or reddish, all inhabit the same block of earth. They occupy two great socles, one lesser socle and numberless islands.

The major socle or the old continent is composed of three divisions, which meet around the Mediterranean. The main mass, called Asia, is said to have been the cradle of the human race, though this is by no means proven; attached to it on the north-west is white Europe, and on the south-west black Africa. Together, the three divisions contain 1315 million souls, or thirteen-fifteenths of the population of the world, on an area of over 32 million square miles.

	Square Miles.	Inhabitants.
Asia ¹	16,317,177	793,524,000
Africa	12,136,068	163,953,000
Europe ²	3,836,000	357,379,000
	<hr/> 32,289,245	<hr/> 1,314,856,000

America, the second of the two great socles, is called the New World by Europeans. Not that it has recently sprung from the ocean, thus augmenting by nearly a third the domain of the rulers of the earth, but because, after a first discovery, which was known only to certain Scandinavians, and which they themselves had forgotten, its existence was revealed to the Old World in 1492, by an Italian (perhaps a Corsican³), Christopher Columbus, who sailed thither with three Spanish vessels. It embraces two sub-continent, called North America and South America, which are joined by a series of isthmuses, the most important of which is Panama.

	Square Miles.	Inhabitants.
North America	9,035,684	88,400,000
South America	7,083,997	33,300,000
	<hr/> 16,119,681	<hr/> 121,700,000

The minor socle, Australia, is arid and barren; three-quarters of it is in irreclaimable deserts of dry sand, rocks, and gravel, covered with spiny shrubs. This poor, monotonous continent, peopled by Anglophones, is not even as large as Europe.

	Square Miles.	Inhabitants.
Australia	3,052,333 ⁴	3,230,000

By joining numerous islands scattered over the Pacific to Australia, we add to Europe, Asia, Africa, and America a fifth division of the earth, Oceanica, which has a population of 38 million souls, on 4,098,649 square miles.⁵ The chief island of Oceanica, as well as of the globe, is situated very near Australia; it is called Papua, or New Guinea, and covers 303,200 square miles. The next in size, Borneo (285,872 square miles), lies in the same waters; and near South Africa stretches Madagascar (228,567 square miles).

Oceans, Polar Seas and Lands.—For the inhabitants of the old continent the sun rises on the most vast of the oceans, the Pacific, or Grand-Océan, and sets on a lesser, though immense sea, the Atlantic. The latter separates Europe and Africa from eastern America; the former rolls between Asia and Oceanica, on the west, and America, on the east. The deepest sounding that has yet been made is in the Pacific,

¹ Not including the Sunda Islands.

² Without Nova Zembla.

³ It is claimed by some that Columbus was born at Calvi, instead of Genoa.

⁴ These figures include Tasmania and the smaller islands. — ED. ⁵ With the Sunda archipelago.

27,930 feet. We might expect to find this abyss near the centre of the ocean; but such is not the case. On the contrary, it is scooped out quite close to the Asiatic continent, east of the Kurile Islands. If Mount Everest could be cast into this hollow, the top would still be visible, rising as a scarped island, 1072 feet above the waves. If it is possible that lordlier summits than Mount Everest exist, doubtless the ocean has deeper gulfs than that of Tuscarora (so called from the ship from which the soundings were made). The mountains are readily distinguished and easily measured; but we are left to guess at the configuration of the ocean-bed, and to trust to chance to discover its lowest depression. The Tuscarora abyss nearly doubles the mean depth of the seas, which is estimated at about 14,640 feet. If the entire earth could be buried in the glaucous ocean, the level would not be raised more than 500 feet.

North and south of both continents cold seas bar the way to the poles; the South Pole is even more jealously guarded than the North. Explorers have never been able to penetrate as far into the Antarctic Ocean as into the Arctic. On the north they have passed a little beyond the 84th parallel¹ of latitude; but death has chilled many of the boldest of these profaners of the eternal silence. The stillness of the polar fields is unbroken, save by the almost noiseless tread of the white bear roaming through the falling snow or under a pale, hazy sun, or by the noise of the seal plunging to escape the bear or coming to breathe at the surface of the water through an opening in the ice. The ice, too, the limitless ice, stretching no one knows whither, but doubtless as far as the pole, is mute three-fourths of the year, all through the polar night and during the first weeks of day. Then it vibrates, cracks, breaks, and floats away in huge blocks; then, even before the long night sets in again, the Arctic and Antarctic seas are ice-bound once more, and on the ice descend the polar snows.

Here and there the ice fastens to some wretched land, — to Jan Mayen, solitary in its white desert; to Spitzbergen and Nova Zembla, not far from Europe; to New Siberia; to the more than desolate Franz-Josef Land; to the Jeannette archipelago, recently faintly seen by the explorers of the Jeannette expedition; to the net-work of islands spread between Behring Strait and Baffin's Bay; and to Greenland.

These polar lands, which are almost absolutely unexplored, especially in the southern hemisphere, are supposed to comprise some 1,700,000 square miles.

¹ The farthest north was reached in 1882, by Lieutenant Lockwood, of the American expedition commanded by Lieutenant Greely. Lockwood pushed along the northern coast of Greenland as far as a small island (Lockwood Island) in 83° 24' N. and 44° 5' W. — *EN.*



THE CAUCASUS.

EUROPE.

Insignificant Size of Europe. — Its Pre-eminence in the World. — Europe surpasses Australia in extent by more than 800,000 square miles, but it is only about a third as large as Africa, less than a fourth of America, and about two-ninths of Asia. It contains some 3,900,000 square miles,¹ two-thirds of which is in plains, the rest in mountains and plateaus. Its greatest length, from south-west to north-east, from the Lusitanian promontory of Saint Vincent to the Russian capes at the northern extremity of the Urals, is about 3450 miles.

On these 3,900,000 square miles, a thirteenth or fourteenth of the entire land surface of the globe, Europe supports almost one fourth of the earth's inhabitants. It is Europe that has given the world its chief poets, artists, inventors, and scientists, and also the half million or million men who have been yearly carrying the literary languages far and wide. America will soon outrank the parent continent in wealth, and probably in invention; but intellectual superiority in the higher sense of the term will doubtless rest with the Europeans for a long time yet.

About a third of Europe, comprising the western and central portions, was colo-

¹ See note, page 8.

nized far back in the past, and is densely peopled. The other two-thirds includes Scandinavia, whose ice-bound domain even the prolific Scandinavians cannot populate; tottering Turkey and Greece; and lastly Russia, a vast empire, embracing more than a half of the area of Europe, but only one fourth of its population.

Boundaries between Europe and Asia.—Through Russia, Europe is attached to Asia, and forms a peninsula of that mighty division of the earth. In some prehistoric age, what is now western and central Europe (the veritable Europe) was separated from the main continent by salt waters extending from the Arctic Ocean to the Black and Caspian Seas. The lakes, marshes, and sluggish rivers of Little Russia, and certain bogs north of the Caucasus, indicate the region where these vanished waves once tossed.

The central chain of the Ural Mountains is a low ridge with easy passes. The Russians do not regard it as the eastern limit of their country. To them there is no Russia in Europe nor Russia in Asia, but eastward as well as westward from the Urals stretches one Russian fatherland; the government of Perm, the bulk of which is in Europe, includes some 50,000 square miles in the basin of the Asiatic Ob, and the governments of Ufa and Orenburg are partly in Europe and partly in Asia.¹ But an eastern boundary must be assigned to Europe, and the Urals constitute the only natural barrier between the flat-lands of Russia and those of Siberia. In former times Asia was made to begin with the river Don: "Europe," writes Camoens, "touches Asia toward the rising sun; it is separated from it by the chill, tortuous river which runs from the Riphæan mountains to Lake Maeotis." South of the Urals, as far as the Caucasus, in the Kirghiz Steppe, at the mouths of the Ural and the Volga, on the Caspian Sea, no elevation forms the parting line between these two divisions of the world. The eastern districts, which we call Asiatic, have the same climate, the same fauna, and the same flora as the western or European districts. In former days, conquering hordes often swept through this broad gap between the last low Ural hills and the first out-mountains of the Caucasus; these centaurs, accustomed for long generations to galloping headlong across the steppes, on horses inured to hunger, thirst, cold, heat, storm, and sand-laden winds, came even from as far away as the Mongols. That was the flood tide, to-day we are witnessing the ebb. The Russians, the Cossacks at their head, are streaming into central Asia through this same pass.

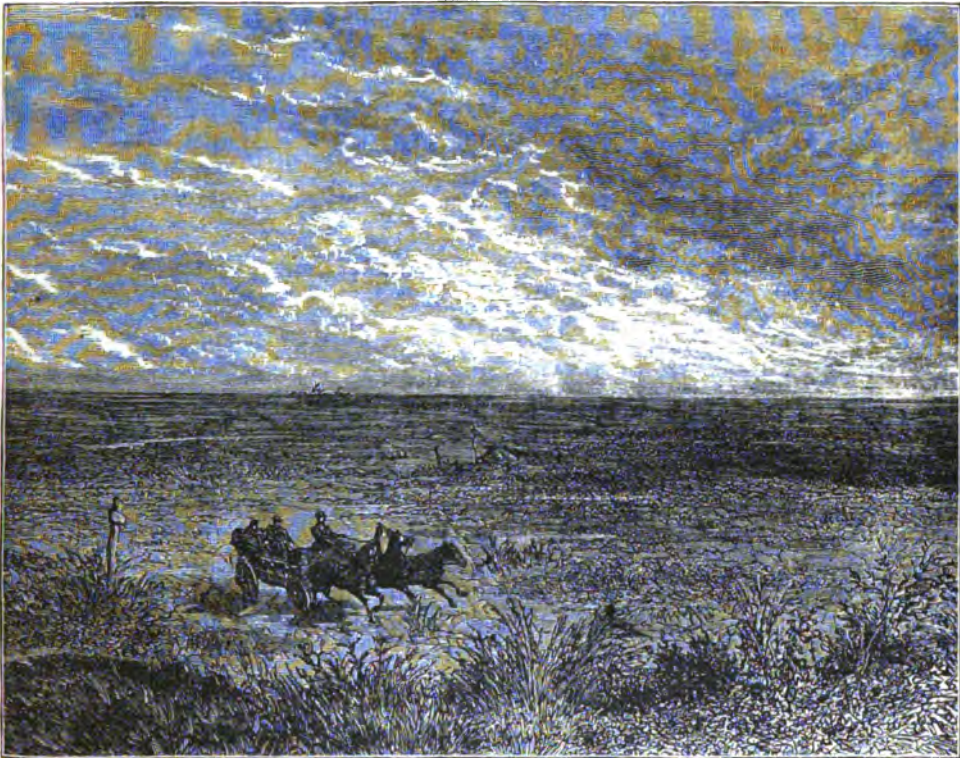
South of the Urals, the Ural River has been adopted as the boundary; then from the mouths of the Ural, the Caspian is followed as far as the peninsula of Apsheron, famous for the naphtha-springs and Field of Fire, where the Ghebers or Fire-Worshippers had their shrine.

From the peninsula of Apsheron to the point where the waters of the Azov mingle with those of the Euxine, the Caucasus pricks with its silvery points sometimes the transparent ether, sometimes the crouching clouds that watch Europe on the north and Asia on the south. Its highest peak, Mount Elbruz, rises 18,526 feet above the ocean, or 2745 feet above Mont Blanc. Beyond the Caucasus, Europe fronts the waves; the Euxine or Black Sea; the Bosphorus; the Sea of Marmora, once the Propontis; the Dardanelles or Hellespont; the Archipelago, consisting of broad lakes and narrow straits which mirror at the same time the promontories of Europe and the Asiatic capes. The Archipelago opens into the Mediterranean. This latter sea, a tributary of the Atlantic, separates southern Europe from northern Africa.

¹ According to Behm and Wagner (*Die Bevölkerung der Erde*, VII.), 49,352 square miles of the government of Perm, 42,734 square miles of the government of Orenburg, and 339 square miles of the government of Ufa, lie east of the Ural range. — Ed.

Continental Europe. — Peninsular Europe. — South-west Winds. — By drawing a line from the Bosphorus to the Prussian city of Königsberg, and another from Königsberg toward the Scandinavian town of Hammerfest, which is far enough north to have days and nights two months long, the continent is divided into two strangely dissimilar sections, into continental Europe on the east, and peninsular Europe on the west.

Eastern Europe, including Russia and Poland, with portions of Germany and Austria, resembles northern and central Asia in its massiveness, the immensity of its plains, the evenness of its surface, the length of its rivers, and the severity of its rather arid climate. The deep forests of the north form no protection to Russia against the malevolent polar blasts, and the Urals, scarcely half as high as the Pyrenees, do not



RUSSIAN STEPPES.

bar out the winds from Siberia. Owing to the remoteness of all the warm seas from whence moist, mild breezes are wafted, Siberia and the Arctic Ocean together subject the Russian plain, even in the south, to periods of incredible cold, and these cold periods are followed by seasons of sultry heat, even to the remotest north. Level, very slightly penetrated by the sea, stiflingly hot, or frozen throughout, with here long stretches of forest and there broad expanses of steppe, eastern Europe possesses the one characteristic of monotony. It is the vast size of this flat, low region that makes the mean elevation of Europe only 974 feet, notwithstanding the Scandinavian mountains, the Carpathians, the Balkans, the Alps, the Apennines, the great plateau of Castile and Estremadura, and the mountains of Corsica, Sardinia, Sicily, and Crete.

The inhabitants of the Russian Plain vary but little more than its scenery; aside from a few Turkish and Finnic tribes, they are all Slavs, more or less mixed with underlying races. The mightiest of these sister peoples are the Great Russians. From Sweden to China, from the Arctic Ocean to the mountains of Armenia, from the river which bore the raft of Tilsit to the two streams that flow from the Roof of the World, Russia comprises a sixth of the land surface of the globe. A broad isthmus, studded with gloomy, fir-encircled lakes, joins the great continental plain to Scandinavia. The marvellously carved coast of Scandinavia, and the climate, which is milder at equal altitudes than that of other countries in the same latitude, gives this peninsula a likeness to western Europe; for it is just this shore indentation that distinguishes the fringed occident of Europe from the massive orient. No other great fragment of the earth has such close communication with the ocean, for there is not an inland town farther from the seaboard than Paris is from Marseilles.

The climate of western Europe is warmer than that of other countries in corresponding latitudes. The same parallels pass through Norway, where the sheep sleep out-of-doors in winter, and through Greenland, which is nothing more than a glacier plateau wedged between two icy seas; through Ireland, where the difference between the mean of the warmest and that of the coldest month of the year is only 20 to 25 degrees, and through Siberian Irkutsk, where the same variation is from 70 to 75 degrees; through Paris, which is damp rather than cold, and Quebec, where the mercury sometimes freezes; through Menton, with its palms, and through Manchuria, whose firs are often laden with snow.

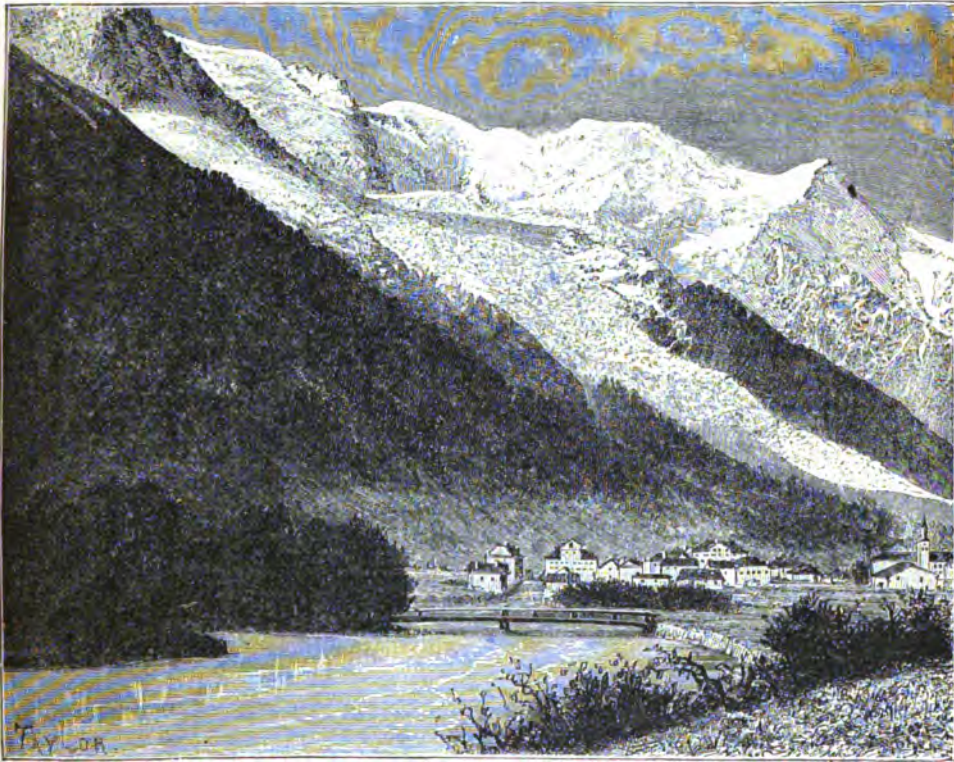
Of the two seas which bathe peninsular Europe, the one on the north and west, the Atlantic, is furrowed by a current having a temperature several degrees higher than that of the waters through which it passes. This current, called the Gulf-stream, throws a flood of warm water against the shores of Europe, from Portugal to Lapland. The southern sea, the Mediterranean, has no share in the Gulfstream, but, protected from the northern winds by the Cevennes, the Alps, and the mountains of the Illyrian peninsula, it spreads its waters voluptuously to the southern breezes.

Warm south-west and west winds blow from the Atlantic nearly all the year, making the climate of western Europe mild, and bringing sufficient moisture to impart to the soil a fertility which it could never derive from the pale sun. The humid, temperate climate of the regions from the bar of the Douro, if not from Coimbra, to the mouth of the Elbe, is due to the predominance of these rain-laden, warm breezes over the gales from the north and east. From the Straits of Gibraltar to the gilded rocks of the isles of Greece, in the most renowned three peninsulas of the world (and also in Languedoc and Provence), the Europeans of the Mediterranean have less rain, by far, than those of the Atlantic, for the winds come from the south, even from the burnt-out Sahara; but their sea is blue and mild, their sky brilliant.

Another rare advantage which occidental Europe possesses is the proportionate distribution of its surface. Everything is balanced here, plains, valleys, plateaus, and mountains, whilst oriental Europe is all in plains and steppes. Asia has too many lofty, cold plateaus; Africa, too many deserts, and no broad peaceful rivers; America, too many savannas, llanos, and pampas; and lastly, Australia has too little rain, too few rivers, too few mountains, and, like Africa, also, it has few deep gulfs or projecting peninsulas.

Mountains of Europe. — The Alps and their Eternal Snows. — The mountains dearest to the Europeans are the Alps; they are the most beautiful, and they send down the greatest amount of life-giving water. The Urals dart no bold peak into the heavens; on the north, they sink imperceptibly into the polar plains over which dwarfed men roam; on the south, they melt into the wretched steppes where barbarian horsemen stretch their felt tents, where Arctic cold, fierce heat, and savage winds hold empire in turn, leaving no place for a mild season in the ever renewed cycle of the years.

The Caucasus chain is loftier than the Alps, but is this in reality a European range? Though it rears its peaks between Europe and Asia, it is attached especially



THE ALPS.

to Asia, through the mountains and plateaus extending from Armenia into Asia Minor and Persia. In Europe it looks down on plains once covered by the sea which separated these two divisions of the world.

The Russian hills have none of the true mountain characteristics; they are low, destitute of glaciers and torrents; but mighty rivers are cradled among them, such as the Volga, the Don, the Dnieper, the Dwina, the Neva, and the Dâna.

The Scandinavian mountains have cataracts so lofty that they seem to fall from the sky, snows stretching beyond the horizon, and gloomy lakes with firs and mosses; on the Norwegian fiords there are sites as imposing as any in Switzerland, in the Tyrol, or in Savoy; but the proudest two summits of Scandinavia, piled one above

the other, would scarcely rival the king of the Alps; moreover, these mountains are massed in a peninsula, and constitute the life of the peninsula alone, and not that of Europe.

The numerous peoples grouped around the Carpathians have left intact many of the virgin forests of this long, semi-circular range. Poles, Germans, Czechs, Slovaks, Ruthenians, Hungarians, Transylvanian, Moldavian, and Wallachian Roumanians drink here from the sources of a thousand torrents that go to form the Dniester, the Vistula, the Oder, and Magyar and Roumanian rivers. But the Carpathians are not the Alps, notwithstanding their 90,000 and over of square miles and their partitionment among ten nations, belonging to four different races, notwithstanding their wild Tatra, their woods, their rivers, the steepness of their slopes, and the loftiness of their crests; they have neither glaciers nor great lakes, and they are lacking in altitude. As in Scandinavia, it would be necessary to pile Pelion on Ossa to rear a peak equal to Mont Blanc.

The German mountains, the Vosges, the Jura (the latter range famous for its *chutes*, or transverse gorges), the French Mountains, the gibbous surface of Great Britain, have nothing more than a local importance; they constitute the relief of a few provinces, they feed a few rivers, and serve as an asylum for clans that retain the vigorous rusticity of their youth, and sometimes even the language of former times; but none of these mountain masses glisten with snows lofty enough to defy the summer heat; no peak rises 6500 feet above the sea.

The French of the region stretching from Bayonne to Port-Vendres, the Basques, the Catalans, the Spaniards of Aragon, of Asturias, of Old Castile, of the kingdom of Leon, and the semi-Portuguese of Galicia, boast of the grandeur of the Pyrenees. But it is in vain that this mighty wall lifts its white tops and blue pyramids against the horizon; in vain it separates two climes and two dissimilar physical regions; in vain this immovable barrier between Spain and France flings its green torrents to two nations, and pours forth the four large streams of the Garonne, the Adour, the Ebro, and the Minho;—the Pyrenees are valueless except to the Spaniards and the French; and all their torrents combined would be nothing more than a brook compared with the river which should unite all the waters of the Alps.

The Iberian Mountains, including even the Sierra Nevada range, which is higher than the Pyrenees, imprisoned as they are in their peninsula, count for little or nothing in the life of Europe. Their forests have been felled, their springs are no longer able to feed the streams, and their summits form a barrier to the sea-winds, thus parching and hardening central Spain. The Apennines of Italy are beautiful. They float in a transparent atmosphere; but they do not pass beyond the limits of their narrow peninsula, and their proudest heads would not reach the breast of one of the Alpine giants. Superb Etna shades but a bit of insular coast; and lastly, the chains of Turkey and Greece can boast of no glaciers. And if the Hellenes made Thessalian Olympus the home of the gods, it was because the occident was unknown to them.

The Alps embrace something like 100,000 square miles, and their ponderous glaciers cover hundreds upon hundreds of square miles in Switzerland, in Germany, in Austria, in Italy, and in France. From the foot of these glaciers turbid waters escape, which transport their mire into lakes, out of which they flow a beautiful blue or green. It is in this way that some of the most famous European rivers are formed; for example, the Rhine, the Rhone, the Po, and four large branches of the

Danube, namely, the Isar, the Inn, the Drave, and the Save. Through these streams the Alps extend their influence to the ends of Europe,—to the North Sea, to the Mediterranean, and to the Euxine. On the Alpine peaks the nations of the west breathe the purest air; in their supreme deserts they tread the whitest snows.

A fourth part of all the living waters of Europe descends from these mountains, the proudest of which is Mont Cervin, the loftiest Mont Blanc, which rises to 15,781



A RUSSIAN MUSICIAN.

feet, above nearly 115 square miles of perpetual snow. In Savoy, where Mont Blanc lifts its head, the Tarentaise and Maurienne Alps are diademed with glaciers, which form the Isère; in Dauphiny, Mont Pelvoux divides its snows between the Isère and the Durance; in Switzerland, Monte Rosa, rival of Mont Blanc, parts the waters of its glaciers between the gorge of the Rhone and the plain of the Po; the Bernese Oberland pours its gifts into the Rhone and the Rhine; Saint Gothard contributes its

portion to the Rhine, to the Rhone, and to the Po; Bernina supplies the Inn; in Austria, the Oetzthal, Stubay, Orteler, and Hohe Tauern groups have also their snow-fields.

"Behold that queen in the clear, sublime air, on an imperishable throne! on her brow glistens a magic crown of diamonds; the sun darts his shafts of light upon her, but these shafts gild without warming her!"¹ Numberless Alpine peaks might claim this song of the poet; for the snow-line in the Alps is between 8000 and 10,000 feet,—an elevation surpassed by countless domes, points, horns, *arêtes*, ridges, and dismal rocks in the midst of snows whose virgin whiteness the evening sun turns to roseate hues; we grow weary in naming even the peaks over 13,000 feet high. Pic de Néthou, the culminating point of the Pyrenees, is 4616 feet lower than Mont Blanc. From 8 million to 9 million men dwell in the Alps. Fully a third of these speak German, a quarter Italian, another quarter French; more than a tenth use Slovenian, a Slavic dialect; about one forty-fifth speak Friulian, an Italian *patois*; one one-hundred-eighty-second make use of Romansch and Ladin, both dialects somewhat resembling those of the south of France.

Among the European rivers, the Russian Volga is the longest, and has the largest basin. But this basin, of 563,000 square miles, has no glaciers; it is purely continental, and, consequently, has a scant rainfall. So the volume of the great Slavic river is much less than that of the Danube; and yet the German-Hungarian-Slavic-Roumanian stream drains only 315,500 square miles. The clearest of all the European streams is the Neva, which is purified by Russia's noblest lakes, Onega and Ladoga. The Rhine, renowned and beautiful, is large for the extent of its basin, which embraces not more than 77,000 square miles. Of greater volume still in proportion to the area whose tribute they bear to the ocean are the Rhone of the French, which drains less than 40,000 square miles, and the Po of the Italians, which receives the waters from not more than 30,000 square miles.

Among the streams that do not flow directly to the sea, the most important is the Kama, an affluent of the Volga, and in reality its parent branch. It drains an area of 203,000 square miles. The Oka, another tributary, another parent branch of the Volga, has a catchment basin of over 90,000 square miles.

The Europeans, Latins, Saxons, and Slavs. — The Five Major Languages. — When we reflect on the nature of this peninsular division of the earth, can we wonder that, though comprising only about a thirteenth of the land surface of the globe, it supports nearly one-fourth of the human race? Europe's 357 million inhabitants are multiplying rapidly, in spite of bodily havoc and mental tortures, in spite of the ruin caused by ambition, luxury, envy, idleness, absinthe, alcohol, tobacco, nights at the gaming table, and the vitiated air of towns that are nothing more than heaps of hovels. Rich or poor, nowhere does the human race suffer more than here; every year more than 22,000 Europeans take their own lives; and nearly all of these are in the western and central regions, among the nations vainest of themselves. Savages and barbarians never commit suicide; it is rare that the inhabitants of hot countries commit suicide.

After Greece of the sonorous tongue and of swarming republics, Rome established in the place of the wrecked nations of the world the law and language, and, in a measure, the race of Latium. She created peoples that still flourish in Europe and that are grow-

¹ The poet, a German, is speaking here of the Jungfrau, a magnificent mountain of the Bernese Oberland.



A SPANISH SHEPHERD.

ing in Africa and America under the names of Latin, Neo-Latin, or Romance races. During the middle ages it was two of these peoples, the Italians and the French, that guarded almost unaided the sciences, art, and poetry. They were the hope of future centuries. At the dawn of the modern era, two other Latin nations, the Portuguese and the Spaniards, accomplished, as explorers of seas, forests, savannas, and sierras, a multitude of heroic labors. No other branch of the human family has ever furnished so many discoverers, so many subjugators of towns, so many conquerors and destroyers of peoples. These men of cloak and sword, heroes, if such existed, though stained with blood, have not left everywhere the marks of their passage; their track is hardly visible in Africa, and still less so in Asia; but the favored regions of South America have become wonted to the two Iberian tongues. Coming from that warm land where the palms of Elche wave, these southerners easily took root in the soil which would have soon sapped the life-blood of the men of the north.

Later on, the French accomplished in North America, though with less cruelty, what the Spaniards and Portuguese had done in South America. Their pioneers, hunters, discoverers, and missionaries explored the country of the Great Lakes in all directions, the Mississippi, the Missouri, the Rockies, and the semi-polar basins. The French Canadians had already named the rivers, lakes, mountains, passes, and tribes of three-fourths of North America before the Anglo-Saxons, who were twenty times more numerous, had scarcely traversed the out-valleys of the Alleghanies. France has been less fortunate than Iberia; for she has lost all of Canada, the Northwest, the Great West, and the entire Mississippi, from its head lakes to the outermost deposit of its delta.

It is Europe that furnishes the most of the world's explorers; Europe peoples all the lands of the earth, even those sections out of which she is seemingly barred by tropic heat and the poisonous exhalations of marshes. Her three great races, the Latins, Saxons, and Slavs, are all engaged in the work of conquest, a double work, at the same time unjust and just, fatal and beneficent.

Spain has ceased to rule over "the empire on which the sun never sets," but this empire is still Spanish in language, as well as in the proud, passionate nature of its inhabitants, in their endurance, gloomy energy, gravity, haughty politeness, grandiloquence, magnanimity, patriotism, and the totality of rare qualities which we comprehend in the Castilian word *cabalerosidad*.¹ Portugal has lost Brazil, but Santa Cruz² is still Lusitanian, and it is possible that Portuguese Africa may one day become a lesser Brazil. France has been driven from Canada, but the French language and the French race still survive there. France is more firmly rooted than any other people in Africa,—in the Atlas Mountains, on the Niger, and even on the Congo. Italy has given the world no nation of her own stock and her own tongue, but she populates the colonies founded by the other "Latins," as Germany populates those of the other "Saxons." She sends emigrants to the Portuguese and Spaniards of America, and to the French of Africa. The Portuguese emigrate to Brazil, to Angola, to Mossamedes, and, in small numbers, to all quarters of the globe. The Spaniards go to Spanish America, and even to Algeria; the French to Algeria, Canada, and also to Spanish America.

Thus much for the Latins. As for the Saxons, England is overspreading the temperate and southern regions, with the exception of South America. Foremost of mankind in daring and fortune, the British have gained a footing in the most favored parts of the globe, drawing into their orbit the Scotch, whom they have annexed;

¹ Chivalrousness.

² The old name of Brazil.

the Irish, their victims; the Scandinavians, who constituted one of the chief fountains of English blood, and the Germans, who take great pride in the remarkable expansion of the English, because the latter are of Germanic race. The Germans deceive themselves in this. If the element supplied by the Angles, the Saxons, the Danes, the Normans, and the Frieslanders, in short, if the Teutonic element gave birth to the English race, it was by engrafting itself upon the Celtic element, from which the Scotch, the Irish, the French, and, in large measure, the Italians sprang; the pretended Anglo-Saxons are simply Germanized Celts speaking a language the essential words of which come from Teutonic roots. The time has not yet arrived when the empire of the earth can be decreed to the Saxons. The colonies planted beyond the seas by the Meridional peoples, which we stigmatize as Latins, are flowering into youth to-day, — even that of Algeria, the latest comer. These nations are no more Latin than the English colonies are Saxon, but they speak Neo-Latin tongues. The countries which they govern are the most fruitful in the world, and will give asylum to two billion men. Already one hundred fifty thousand Meridionals set out annually from Europe, headed by the Italians, to join these Neo-Spaniards, Neo-Lusitanians, or Neo-French. Why not prophesy for the Latins a destiny as glorious as that predicted for the Saxons?

Then there is an empire ruled by a race called the Slavic, a name signifying "the glorious," or, perhaps, "the speaking," as opposed to mute, uncomprehended, foreign. The Slavs occupy more than a half of Europe, and they will soon cover a half of Asia, in one compact body. In this empire, where a hundred tongues are heard, the Great Russians preponderate to such an extent that all the dialects of the Czar's realm are doomed to disappear one after another before their idiom.

Let us shake off the nightmare of that universal language, so ardently desired by traders and so dreaded by educated minds. A human family with but one dialect and one literature would be like an earth with no asperities, no glaciers, torrents, precipices, forests, nor lakes, a forbidding and certainly sterile plain. Man's device, *viribus unitis*, implies alliance and not destruction. The death of a dialect is the death of a world, for it leaves behind nothing more than a vague reflection of itself, a few books, or maps, a dictionary, a few papers, names, and words; and this is indeed death, for speech is speech only when it lives and vibrates.

Five of the European tongues, namely the Russian, the English, the Spanish, the French, and the Portuguese, have a great future before them, because they are widely spoken outside of Europe, in vast countries which are now or were once colonies of Russia, England, Spain, France, and Portugal. These colonies are such in the true sense of the word; that is to say, countries cultivated by peasants from the home-land who have sufficient vigor to produce races capable of growth. Such are Siberia, Algeria, Canada, Brazil, Chili, and New Zealand.

Russian is the maternal or official tongue of over a hundred ten million, and we can estimate at a million, or perhaps at twelve hundred thousand, the annual increase of those who speak it from the cradle or who learn it later.

English, which is spoken by above a hundred ten million, gains annually from sixteen to eighteen hundred thousand Anglophones, if not two million.

Spanish is the parent tongue or official idiom and the "general language" of more than sixty-five million people (including the Philippine Islanders): this number is augmented yearly by seven or eight hundred thousand Castilianized persons.

French, spoken by forty-five millions, beside being the official language of Algeria-Tunis, of the Senegal-Niger and of the Gaboon-Congo regions, of French Indo-China, and, concurrently with the English, of all the immense Dominion of Canada, acquires annually an additional two hundred twenty to two hundred fifty thousand, of whom a hundred fifty thousand come from France; the rest are furnished by Belgium, French Switzerland, Algeria, Hayti and the French Antilles, and above all by Canada.

Portuguese, which is spoken by nineteen millions, must have an annual gain equal to that of the French; but the enormous size of Brazil, a giant which surmounts all obstacles to growth, presages for this language from the beginning of the next century a twofold, threefold, and perhaps some day a tenfold increase. What will it be when Portuguese Africa has shaken off its swaddling-clothes?

All these accretions are forming at an ever accelerating rate: however, English is growing more rapidly than the other tongues, owing to the floods of emigrants that are sweeping over the lands where it prevails, propagated by some 17,000 newspapers, two-thirds of which are published in North America.¹ The French possesses scarcely 4000 newspapers, the Spanish less than 2000, while the German has 8000. "Deutsch," however, has seemingly no great future in store for it, for the 250,000 subjects which Germany disperses yearly throughout the world abandon their language in the first generation, or at the latest in the second, to the profit of the English and the Latins.

Since the English are extending European influence outside of Europe more widely than any other people, we will begin our description of the land of the "Pale-Faces" with England.

THE UNITED KINGDOM OF GREAT BRITAIN AND IRELAND.

The British Channel. — Insignificant Size of the Country, Power of the People. — The United Kingdom, besieged on every side by the waves, is the largest archipelago of Europe. It is separated from France, on the south, by the English Channel; from Holland, Germany, and Norway, on the east, by the North Sea; on the west roars the Atlantic, and on the north beats a sea which is studded with islands at first, and then stretches away toward the pole destitute of lands as far as Iceland and Jan Mayen.

The Channel, parent of shipwrecks, has not always heaved its angry billows; there was a time when Great Britain formed a part of the mainland, from which every tempest now removes it farther and farther, for these restless waters have been wearing away the cliffs for long centuries, both on the English coast and on the French. Much of the débris is ground to powder and carried off by the waves, to be deposited along the shores of Holland and eastern England. In this way, two plains are steadily enlarging: in Holland, the polders; in England, the fens of the Wash and the Humber, comprising nearly 1200 square miles of peaty soil.

The British Channel is shallow; if its waters should sink 200 feet, England would have a bridge across to France, and if the North Sea should be lowered 650 feet, the

¹ It may be of interest to note that, according to the official reports for 1880, the total number of periodicals of all sorts published in the United States, at that date, was 11,314, of which 10,515 were in English. They now number 19,011, their total yearly issues exceeding 4,000,000,000. — Ed.

British archipelago would be joined to Germany, though not to Norway, along which extends a fosse 2600 feet deep. The two banks of the Channel will be united at no distant day, either by a tunnel under its bed, which would be the longest subterranean way in the world, or by a stupendous bridge, the most daring conception of man's genius since the day when some ancestor in the remote past, the first of the "pontiffs" in the ancient acceptation of the term, originated the idea of throwing a tree-trunk across a torrent. The tunnel had the preference; it was even begun, when Albion became alarmed. She feared that the submarine opening would one day give passage to a huge continental army, infantry, cavalry, artillery, wagon-trains, all moving noiselessly in the darkness. Perhaps she would dread less some mighty bridge, the revolving arch of which she could guard.

The British archipelago, almost equalling Norway in extent, covers an area of nearly 121,500 square miles, something less than half of which is mountainous; but on this space, scarcely one twenty-fifth as large as the United States, dwell about 38 million of inhabitants,¹ or nineteen times the number of Norwegians and eighteen thirtieths of the population of the United States. This density of population is due to the fact that the land is tilled to perfection, although the farms are inadequate for the support of the towns, which are of colossal proportions; the grain supply of the United Kingdom is obtained in part from abroad. Hardly a nation exists which is as rich in minerals; there is none that mines so much coal, forges so much iron, weaves so much wool and cotton, exchanges so many commodities with all peoples, barbarous or civilized; none that scatters so many ships over all the seas, from the Orient to the Occident; none that unfurls its proud colors on more tributary shores. *Rule, Britannia*, is the national refrain. *Dieu et mon droit* (that is, *ma force*) is the device on the British escutcheon; this device is a relic of the days when French was the official language of England.

The United Kingdom comprises the two vast islands of Great Britain and Ireland. Great Britain includes three countries, England, Wales, and Scotland; and two races, the Saxons, and the Celts of Wales and the Scottish Highlands.

¹ According to the enumeration of 1891, the population of the United Kingdom was distributed as follows:—

	AREA IN SQ. MILES.	POPULATION.
England	50,823	27,482,104
Wales	7,363	1,518,914
Scotland	30,462	4,033,103
Ireland	32,531	4,706,162
Isle of Man	220	55,598
Channel Islands	75	92,272
Army, navy, and merchant seamen abroad,		215,374 (1881)
Total	121,474	38,103,527

ENGLAND.

Coasts, Lowlands, and Mountains. — Mild Climate. — With its cortege of isles and islets, Great Britain wrests from the ocean 89,000 square miles, a territory which is occupied by some 33 million inhabitants. It is by far the largest island in Europe, Sicily, the second in extent, having an area only about a ninth as great. It is very long, broader at the south than at the north, and at the north than in the centre; it looks out over waves that have generously carved its shores. The broken coast-line exceeds 2800 miles, and even in the south, in the most spacious section, there is no point at a distance of over 60 miles from the seaboard, or from the salt water which ascends the rivers.

The west, centre, and north of the island, that is, the Cornwall peninsula, Wales, Derby, Cumberland, Westmoreland, and Scotland, rise in mountains; the east and especially the south, which constitutes England proper, undulate in hills or stretch out in meadows and prairies of a marvellous green, shaded by magnificent trees; and everywhere there are towns, some of them monstrous in size, factories, chimneys, and thick, black coal-smoke.

Great Britain has no gigantic or even mediocre mountains. Not one of them all has glaciers. They are high hills, rising in a vapory atmosphere, not daring, terrible peaks, clad in snow-armor. The loftiest shiver under the mists of gloomy Scotland, and the next highest are the summits of Wales; in England, cloud-capped Scawfell, only 3232 feet high, in the Cumberland and Westmoreland ranges, is the culminating point. The mountains here possess a twofold beauty, the severe beauty of deep forests and of gorges cut through granite and porphyry, and the graceful beauty of such charming lake-shores as those of Windemere, or Winandermere, a lake nearly 240 feet deep, and covering about 8 square miles. From their tops we see on the west the Irish Sea and the Isle of Man; on the east, streams too small for their cataracts to have any claim to fame unite in rivers that flow toward the North Sea. The Peak of Derby (2000 feet) is a mountainous district not far from Manchester. The Devonian hills and the mountains of Cornwall rise as dismal, heath-grown rocks, between the English Channel and the wide Bristol Channel, which is itself a tumultuous flood, upheaved by tides of fabulous heights. These two channels are cutting and carving this peninsula, the slender point of which is named Cornwall,—a Breton peninsula dismantled by the breakers; washing away the capes, fashioning coves in the slate, whetting or blunting the reefs, the waves are wearing off the jacket of cliffs here as far as the serpentine rocks of Lizard Point and the granite bluffs of Land's End,—that companion to two other continental extremities, the Finistère of France and the Finisterre of Galicia in Spain.

This sea is pitiless. More savage still, the dwellers along its shores used to lure vessels on the reefs by false lights; now turned salvors, and ever ready to face death, they have forgotten the foul industry of their fathers, but the billows of Cornwall have lost none of their voracity: in certain quarters, at the entrance to the English Channel, which is a highway for sailing ships as well as steamers on the London, Liverpool, and Glasgow routes, they take their full share of the two thousand shipwrecks suffered yearly by the prodigious fleet setting out from British ports, or re-

turning thither with the spoils of the earth.¹ They engulf also hundreds of boats manned by fishermen, those simplest and bravest of men.

From the high heaths, from the lakes and marshes, from the wet moors and damp meadows of Great Britain, spring rivers, which bear for the most part names of Celtic and not of Saxon origin; for, though Anglo-Saxonism has covered up almost everything in this country, it has destroyed scarcely anything. These streams are graceful, or somewhat spirited, in the mountains or hills. They hardly reach the lowlands before the sea absorbs them or advances to meet them in broad estuaries, thus imparting a false magnitude to them. Such are the Thames, which is the most noted; the Wash,



CORNWALL COPPER-WORKS.

a wide embouchure, a mire-pit and sand-pit, which nature is filling up, and which man is gradually diminishing by dikes; the Humber, the basin of which is the largest in the island, although it embraces less than 10,000 square miles; the picturesque Severn; the torrents of Scotland.

The Thames, the muddy water of which are familiar to so many seamen, has an average width of about two miles at London, and it is much broader below the imperial city. But, though a person, on entering the commercial metropolis of the globe through the gulf-like embouchure, might imagine that he was ascending a Mis-

¹ More than fifty million tons, a third of which is carried under the English flag. — RECLUS.

The total amount of tonnage of vessels entered and cleared at the ports of the United Kingdom, with cargoes only, in the year 1889 was 61,566,000, of which 45,843,000 was British. — ED.

issippi, one who contemplates the river in its insignificance near Oxford, the famous rival of Cambridge, has difficulty in believing that this transparent, narrow stream will become a few leagues farther down the broad and turbid estuary which is ploughed by more ships than any other in the world. Rising on the hill-sides near the spot where the Severn begins to broaden out as an estuary, it carries a mean of only 1375 cubic feet per second at the point where it really terminates; that is to say, at the place where the tide ceases to be felt. This flow of 1375 cubic feet, which is reduced at low water to 700, and which the greatest flood never raises to 14,000, is the drainage of about 4600 square miles; the entire basin, including the marine portion, embraces 6200 square miles.

Great Britain's importance in the world is due to its insularity and its sea-winds, as well as to its countless ports, its metals hidden in the earth, and its mines of coal. Owing to the evaporations from the ocean, rain is abundant, but snow is scant; the annual rainfall, varying much according to the locality, is from 20 to 30 inches in eastern Scotland, and more than 145 inches on the Cumberland coast; the mean is 35 inches, or 5 inches more than that of France. The west, whither are wafted all the ocean mists, has the lion's share; the east receives the little that remains of the clouds shattered by the western mountains. These rains, the cloudy sky, the fogs, the embrace of the ocean, and the sea-breezes, give England and Scotland a climate which they could never claim from their latitude. Instead of a Labrador, with frozen marshes and perpetual cold, it is a temperate region, with full-banked rivers, green meadows, opulent harvests, trees running over with sap, and swarming towns. The icy chill of the frosts is confined to the uplands; in the lowlands, along the coasts, and especially in the south-west, the Englishman can proudly exhibit the myrtle and the oleander to the southerner who ridicules this sunlight sifted through the fogs; the glory of the south, the orange-tree itself, — cultivated, it is true, — bears fruit in the most sheltered valleys of Cornwall; the aloe grows there in alleys, and its companion, the date-tree, there defies the cold of winter. Anglesea has its bamboos, and the Scilly Islands can boast of their palms.

The English. — Their Language and its Future. — England is the agricultural, mining, industrial, commercial, political, and social centre of the United Kingdom, the heart of the immense British Empire. At the beginning of the century now drawing to a close, England and Wales united had a population of only 9 million. To-day England alone counts more than 27 million inhabitants, on less than 51,000 square miles, or more than 540 souls to the square mile. And yet, a man standing on the Liverpool docks, and watching the vessels that depart daily for transmarine countries laden with Englishmen bidding a final adieu to their native land, would think that Old England was on the eve of going to waste; but this prolific nation responds to every hundred deaths with one hundred fifty-six births.² The British people increases by some 1200 souls per day, immigration and emigration aside.

We can find much to criticise beneath the order, good government, discipline, and toil of this much vaunted hive. Albion dazzles us by her pomp, her labor, her riches, her prolificness, her throngs of emigrants and multitudes of ships; but back of this show of opulence a misery hitherto unknown in the world is threatening ruin to

¹ The United States, as densely peopled, would contain a population of 1500 million, or above the total of the present inhabitants of the globe. — Ed.

² In the year ending Dec. 31, 1889, according to the returns of the respective registrars-general, there were 1,115,731 births in Great Britain and Ireland, against 674,157 deaths. The ratio of births per 1000 of population was 32.0; that of deaths, 19.1. — Ed.



VICTORIA TOWER, PARLIAMENT BUILDINGS, LONDON.

the proud aristocracy of the English "upper classes." It is the expatriation of the poor by thousands and by millions that has alone saved the nation from riots and civil wars, as its insularity has won for it the inestimable happiness of not fearing foreign invasion: but for the sea which protected England from the Spain of Philip II. and from the France of Napoleon, she would have paid more than once for her selfishness, her rapacity, her thirst for gain, and her denials of justice, — by blood, overthrow, and, perhaps, the loss of her pre-eminence. It is likewise the poverty of her children that has made her so great: she has thrown them, and she is still throwing them, into America, Oceanica, Asia, and Africa, where, far from home, they are strengthening the power of a cruel mother.

England's lords, manufacturers, bankers, merchants, and ship-owners have amassed enormous fortunes by crushing multitudes of navvies, mechanics, miners, fishermen, and sailors. We know what fate overtakes the working-man of English towns, and the miner stifling in the coal deeps¹ of the "Black Countries." The English field-laborer is not the owner of the soil which he tills; England has no peasantry but merely hinds and hireling sheep-tenders; above these poor creatures is the farmer, above the farmer is the landlord or great proprietor; one hundred fifty landlords possess a good part of England, and seventeen hundred own a half of Scotland.

It is only a few years since men regarded England as the Jerusalem of the new era; parliament, constitution, customs, laws, manners, everything there seemed to be in perfection; England was the example for the world, the salt of the earth, the hope of the race. But it is clear now that British civilization has in it as many germs of decay as the Egyptian, the Grecian, the Roman, the Spanish, or the French. It would be too hard if the last word of the ideal were the motto, repeated a million times daily, "Time is money!" too cruel if "law without love" were the whole of truth, comfort-seeking the whole of wisdom, hurried, breathless plundering of the earth the all of history, and deadly competition the only fraternity of man.

The English, who are spreading from England over North America, southern Africa, Australia, and the islands, have sprung from mixtures of ancient Celtic clans with Germans and Scandinavians; with the Normans and the northern and southern French who entered the country under William the Conqueror, with the Flemings who settled in England in the fourteenth, fifteenth, and sixteenth centuries, with the Walloons whose arrival dates from the reign of Edward VI., and with the 120,000 Huguenots who sought an asylum in the British island after the revocation of the Edict of Nantes. In exchange for a place where to lay their heads, the Calvinists brought the English various industries; the Flemings, before them, had done the same thing. Nearly all that gives England her supremacy has been derived from the continent of Europe.

To call the English Anglo-Saxons is to do violence to history. This name recognizes the Germanic element which has entered into the nation, and that alone; it disregards the Celtic trunk, on which the other branches were engrafted, and the French element, which was the true leaven of English greatness. When the triumphant Bastard defeated the Saxons on the field of Hastings, at the head of an army composed of men from all the northern provinces of France, this victory made French one of the three languages of England; the other two were the Celtic of the highlands and the Saxon of the lowlands. It is estimated that this land had then

¹ One of these mines has already been excavated to the depth of 2700 feet below the surface.

only two million inhabitants: the mountaineers were barbarians, the lowlanders were dull and rude; now, during the four centuries which elapsed from the Norman conquest to the rout of the English in the valley of Castillon (1453), during all the time that the kings of England were French princes, France was constantly drifting toward the Normandy across the sea, and possibly five hundred thousand Frenchmen emigrated to England between 1066 and 1450: Normans, Picards, Bretons, Parisians, natives of Champagne, of Le Mans, of Anjou, of Touraine, of Poitou, and of Gascony, — all these adventurers poured into the crucible where the English people was fused their qualities of cleverness and daring. A certain proverb, which displays more wisdom than many a savant, declares, "A Briton, a Saxon, a Dane, and a Frenchman make an Englishman." Even at the present day, the English race is mixing in England with Irish, German, Scandinavian, French, and Italian elements, with people of every complexion and every tongue. It is said that the dark element brought in by the Celts of Ireland, the Highlanders and islanders of Scotland, the French, the Italians, and numerous cosmopolites, is gaining very perceptibly on the fair. Dark-haired men are apparently of tougher metal than light-haired; owing to their superior powers of resistance and endurance, modern life is less destructive to them, they withstand better the effects of alcohol, of excesses, of factory life, and of sleepless nights, — scorned though they be by the wise men of the north, now that fortune dwells with the English and victory with the Germans.

The English race is extraordinarily vigorous; in physical strength, practical intelligence, mental soundness, and tenacity of purpose, it is the equal of any on the globe. The English possess inventive genius, the love of adventure, the innate instinct of trade, a passion for success, and imperturbable courage; their ideal is money, not for the sake of hoarding it, but to enjoy it. The motto of a successful generalissimo: *Weigh, then dare*,¹ seems to have been made for this people. They are self-centred, but apt to sink into selfishness; vehement, and are often roused to deeds of injustice and cruelty; proud-spirited, and their pride becomes arrogance; restless, and their restlessness turns to discontent and whimsical disgust of life, which often terminates in suicide.²

The English language is German in origin, with copious mixtures of French and words adopted from all the civilized idioms; it is rich, concise, poetic, but unresonant and singularly harsh to the ear; it seems to be a perpetual challenge to the freedom and sonorousness of the human voice. Through the colonies which England scatters over the earth, through her wide supremacy, it is daily taking on more and more of the character of a universal language, such as the Latin once was, and as French still is. The greater part of North America, Australia, various continental sections and a great number of islands, are or will soon be completely under its sway; it is already spoken in the following countries: —

¹ *Erst waegen, dann wagen*: Marshal von Moltke's motto.

² Dr. William Ogle, in a paper read before the Statistical Society, Feb. 16, 1886, on Suicides in England and Wales, says: "In the course of the twenty-six years, 1858-83, the deaths of no fewer than 42,630 persons, a number equivalent to the entire population of a considerable town, such for instance as Cheltenham or Reading, were registered in England and Wales as having been caused by suicide. This number, moreover, was doubtless very far below the true figure, for those deaths, of course, alone are entered in our registers as suicidal which have been declared to be such by a coroner's jury." This paper is published in full in the *Journal of the Statistical Society*, London, March, 1886, and contains some very interesting facts and discussions concerning the relations of suicide to age, sex, season, and occupation. According to statistics gathered 1878-83, of suicides among males between the ages of 25 and 65, in different occupations, the soldiers head the list, with the appalling annual average of 1149 suicides to every million living. — ED.

In America: throughout the United States, except in those districts of Louisiana where French survives, portions of the Rockies, where Spanish is still in use, and numerous settlements of every nationality scattered through the country;—in the Dominion of Canada, an immense district where it exists side by side with the French, which, instead of retreating before it, is rather gaining ground in the eastern district, in Canada proper, and in Acadia;—in Jamaica and many of the Lesser Antilles;—in English Guiana.

In Oceanica: throughout Australia, Tasmania, New Zealand, and the Fiji Islands, which are all English colonies. It is spoken as extensively in the Sandwich Islands as the native Kanaka is, and it is understood by many of the inhabitants of the small archipelagoes of Polynesia, Micronesia, and Melanesia.

In Africa, it is the ruling tongue of Sierra Leone and Liberia; and, concurrently with the Dutch, though less universally, and perhaps with poorer prospects for the future, it is the language of Cape Colony, Natal, Western Griqualand, the Orange Free State, and the Transvaal.

In Asia, it is not the national speech of any people, but even there it is widely used, among more than 280 million British subjects in India and Indo-China; the Japanese learn it more generally than they do Russian, German, or French, and the Chinese in the large ports mumble it in the form of a mongrel *patois* containing more of the English than the Chinese element, and called *pigeon-English*, the word *pigeon* being a corruption of the English word *business*.

The English are mostly Protestants, with a richly endowed State Church, the Anglican, and numerous sects, some of which are ridiculous and foolish; many of them, however, are active, aggressive, and conquest-loving, aiming at nothing less than the subjugation of the entire globe; the labor of their missionaries among the barbarous and civilized nations of all countries is one of Albion's most formidable forces. Among these ministers, who are to be found all over the globe, there are many who are not merely messengers of Salvation and apostles of the Glad Tidings; not all are engaged solely in expounding the doctrines of Law and Grace. These leaders of men are often at the same time manufacturers, merchants, speculators, business agents, or counsellors to some Negro king, and as they all have a wilder enthusiasm for England than they ever had for the twelve tribes of Israel, the ultimate aim of their counsels is the British protectorate. Powerful missionary societies aid them generously, even bountifully, each striving to outdo the others in the work of converting and enlightening the "Gentiles"; some of these societies have enormous receipts, and all of them distribute by the thousands, hundreds of thousands, and millions, tracts, pamphlets, New Testaments, and Bibles, in all the languages of the world.

Towns.—England counts a score of cities containing more than 100,000 inhabitants, and a multitude of towns with over 10,000. In this highly industrial and commercial land, but a small part of the people breathe the country air.

London, the capital of England, of the United Kingdom, and of the entire British Empire, stretches along both banks of the Thames, a river which gives entrance to the largest vessels. It shelters over 4 million inhabitants, in nearly six hundred thousand dwellings. This town, which contained only 35,000 souls five hundred years ago, and 959,000 at the beginning of the century, now comprises within its limits a ninth of the population of the United Kingdom, an eighty-fifth of that of Europe, and one three-hundred-fiftieth of that of the globe. It has nearly as many citizens as Holland, which once held the sceptre of the seas; as Portugal, which at one time ruled

Africa and the Orient; and as Sweden, which has made Russia rock. Switzerland, with all her mountains, her valleys sloping toward four seas, her four languages, and her twenty-two cantons, numbers a million less men than swarm in London. As has been said, London contains more Scotchmen than Edinburgh, more Irishmen than Dublin, more Jews than the Holy Land, more Catholics than Rome. Not only does it surpass all other towns in population, but its commerce, activity, business, and wealth defy competition. Its four million men are not, however, four million prosperous citizens; in no other city are there so many homeless, houseless, shivering, famishing wretches;¹ a huge metropolis might be peopled with the poor ashamed to beg, the fallen women, the cutpurses, and the drunkards, who are at the same time the victims and the pest of London.

With no walls about it, no obstacle before it, London is absorbing boroughs and cities in proportion as its sea of brick advances; hence its formidable growth. Nearly 11,000 houses are built on an average every year, and 259 streets are opened, having a total length of more than 45 miles; "it is not a town, but a province, covered over with buildings." It is five times as large as Paris; but has only twice as many inhabitants. The houses are lower, and less compactly set; the gardens and parks are more numerous and more spacious, and one breathes there more freely than in Paris. For these reasons, the death-rate is lower in London than in many of the other monstrous barracks of the world, and this in spite of the damp climate, the fogs from the Thames, and the coal-smoke; in spite of the foul and loathsome river; in spite of the empty stomachs and semi-nakedness of a million poor.

Liverpool (518,000), on the Mersey, near the Irish Sea, can almost dispute with London the rank of chief commercial city of the world. No European port receives so much cotton from America; none sends thither so many emigrants from Europe. On the opposite bank of the Mersey, which is very broad here, lies Birkenhead, with 99,000 inhabitants.

Manchester (505,000), 31 miles from Liverpool,² has immense woollen and cotton factories. The English scour the world that Manchester may spin, and weave, and sell. A small river of the Mersey basin, dirty and ill-smelling, separates the town from its suburb, Salford (198,000).

Birmingham (429,000), 102 miles in a straight line north-west of London, has no rival in the iron industry. It produces all sorts of metallic articles, from engines to steel pens, from fire-arms to needles. So many trip-hammers, so much smoke, so many forge-fires, so many blackened faces are to be seen here that the English nickname it "the kingdom of the Cyclops," or "the infernal regions."

Leeds (367,500), in the basin of the Ouse, manufactures more woollen fabrics than any other city of the globe.

Sheffield (324,000), on the Don, a branch of the Ouse, is a colossal workshop in metals; it manufactures cutlery for the world.

Bristol (222,000) is on the Avon, which is lost at some distance from the town in the estuary of the Severn, where the tide sometimes rises to the height of 59 feet. This is a leading port of Old England, the first three being London, Liverpool, and Newcastle.

¹ Eighty persons died of starvation in London in 1879.

² A ship-canal connecting Manchester with the sea at Liverpool is in course of construction. This water-way, one of the most important of the kind thus far projected, and three-fourths of which is already completed, will doubtless be the precursor of many other great ship-canals. The total length will be 33½ miles, the depth 26 feet, the width at the bottom 120 feet and at the top 230 feet.

Bradford (216,500), not far from Leeds, has important cloth-works.

Hull (200,000), on the Humber, near the North Sea, is another port of England; it was formerly surpassed by London and Bristol alone.

Newcastle (186,000; 272,000 with Gateshead), on the Tyne, exports enormous quantities of coal; it is for this reason that the "City of Coal" ranks next to London and Liverpool in importance as a port.

Portsmouth (159,000) is a very important naval station, nearly opposite Cherbourg.

Leicester (142,000), on the Soar, a branch of the Trent, is the principal seat of the hosiery manufacture.

Sunderland (131,000), on the Wear, where it empties into the North Sea, ships great quantities of coal, and carries on ship-building.

Nottingham (212,000),¹ on the Trent, manufactures silks and laces.

Oldham (131,500), not far from Manchester, is a manufacturing town.

Brighton (115,000), on the English Channel, opposite the mouth of the Seine, directly south of London, is a favorite watering-place for Londoners.

Bolton (115,000) is one of those enormous manufacturing cities which make the region around Liverpool and Manchester, — that is to say, Lancashire, — a colossal factory, unrivalled to this day.

Blackburn (120,000) forms a part of the monstrous Lancashire factory; as does also its neighbor, Preston (108,000).

Plymouth, a naval station, at the confluence of the Tamar and Plym, has, including Devonport, nearly 140,000 inhabitants.

Wales. — Wales contains only 7363 square miles, with 1,519,000 souls, — that is, nearly 207 persons to the square mile.

The torrents of this land are rapid. Nature is wild, with infinite sweetness here and there, and at times infinite sadness. Stern mountains of schist, granite, porphyry, limestone, and sandstone lure hither a procession of clouds. Rarely does a brilliant sky smile upon their heaths; and too often the cold fogs, fine rain, and moist winds saturate the cloak of the traveller attracted into the Welsh country by the severe beauty of its scenery, by its Druidical monuments, its dolmens, maenhirs, and cromlechs, and by the ruins of its feudal fortresses. The highest mountain is named on English maps *Snowdon* (3571 feet); but its real name is *Moŷl-y-Wyddva*, for thus it is designated by the hundreds of shepherds who contemplate it from the valleys below. It rises near the narrow Menai Strait, which separates the isle of Anglesea from the mainland, directly over the town where we gaze upon one of the most remarkable of the Welsh castles, that of Carnarvon, dating from the thirteenth century.

Wales contributes a large share of its waters to the Severn; this river, less than 200 miles long, in a basin of about 5000 square miles, carries 5300 cubic feet of water per second into the vast estuary where empty also the Wye, a river discharging a volume of 2100 cubic feet per second, and the Avon, which flows by Bristol. Rising in the Plinlimmon, the Severn moves at first north-east toward Manchester, then east toward the estuary of the Wash, then south-east in the direction of London, then directly south, and finally south-west and west in the form of an estuary.

Coal and iron abound in the Welsh mountains, which have become a centre for

¹ Up to 1877, the municipal and parliamentary limits of Nottingham were co-extensive; but in that year the municipal limits were increased from 1996 to 9960 acres. The population of the municipal borough in 1887 was 234,330. — Ed.

giant factories. Near these great barracks, where men are hammering, grinding, and manufacturing, small sheep and black oxen peacefully feed, in meadows kept perpetually green by the moisture of the climate.

For hundreds of years the Welsh fought the Saxons of the plains with a courage worthy of a people that had adopted as its motto: "The truth against the world!" After their defeats toward the end of the thirteenth century, they intrenched themselves in their mountains above the Saxon and Norman lowlands; and there they have preserved their ancient customs and their Cymric Celtic; they have been more fortunate in this respect than the people of Cornwall, who lost their language more than a century ago. The rout of Cornish Celtic was speedy. In 1500, the Tamar, which empties into Plymouth Sound, marked the boundary between this dialect and the English; in 1700, it was still spoken in twenty-three parishes in the west of the peninsula, and yet in 1778 it became extinct, at the death of Dolly Pentreath, an aged woman who had lived in a fishing village near the western capes of Cornwall.

Cymric is making a vigorous fight for life: it has its singing contests, its bard coronations, and its newspapers, which the Welsh read with delight; five of these sheets appear in America. Unfortunately, the language of the Welsh schools is English, and London and Liverpool are too near the *Moel-y-Wyddva*. Notwithstanding everything, the number of Welshmen speaking Cymric does not diminish as does that of the Irishmen or Scotchmen speaking the Irish Celtic; but nearly the entire nation already understand the tongue which will be heir to Welsh as to so many other dialects.

The Welsh are darker, shorter, and stouter than the English. They are occupied in raising cattle, in fishing, and in mining, rather than in cultivating the fields. Like all shepherd peoples, they are meditative; their very beautiful popular songs all breathe a melancholy spirit.

No town in Wales has a population of 100,000; Swansea, a port of the Bristol Channel, and the chief seat of the copper-smelting industry of the world, contains about 90,500 souls, and Merthyr-Tydvil has less than 60,000; this latter town, a collection of furnaces near the Taff, a branch of the Severn, is one of the centres of the iron trade.

SCOTLAND.

Friths, Mountains, and Lakes. — Scotland is proverbial, like Switzerland and Andalusia. If we wish to suggest a picture of rugged, naked ridges, heather, black bogs, solitude, and misty horizons, we speak of the Scottish Highlands: there many a gloomy *ben* pushes out into the sea a *ros*, or basaltic headland, and pours down *linns* into narrow *glens* and *straths*; these *glens* and *straths* open on *lochs*, and, widening into valleys, lose their stream in a broad *aber* or *inver* (harbor, estuary); there the murmur of brooks enlivens the seclusion of hamlets and the desolation of old ruins that recall a tragic history. In this far-away, cragged country, which Rome feared, and from which she timorously separated herself by a wall, every perilous site had its donjon, every site suited to meditation had its monastery. In spite of strifes between clan and clan, and combats of lord against lord, in spite of the long national war of the Scottish Celts against the English, and, lastly, in spite of the

and which remains even the most massive while many of Scotland's castles still remain only in the uncompleted form, where Macbeth murdered Duncan on the morning when he had passed the sea-ward. Marie Stuart, once queen of France.

None of the shores of Scotland is less of a gloomy mystery, for into deep fjords it ever breaking with steep, bare, and cliffs, encumbered with islands and reefs, and having a tendency in its channels of 10 to 12 miles in length. England itself has never seen so broken a coastline as that of Scotland, and the ocean there lies not so much so near to the mountains of the interior.

Scotland is nearly indolent to the sea; many thousands of its inhabitants live by fishing and navigation, and would be of starvation on the barren strategy land; the



THE GRAMPIAN HILLS.

few fertile valleys are narrow and short, or are filled by lakes, under which the soil of the future is gradually forming. The crowded population is supported mainly by its flocks, by manufacturing, by commerce, and by ocean-service; and the Scotch sea is a fish-preserver.

Scotland rears three clusters of mountains: the Southern Highlands, on the Eng-

¹ The original castle of Inverness, the castle which Shakspeare represents as the scene of King Duncan's murder by Macbeth, was razed to the ground by Malcolm Canmore, Duncan's son, and has for centuries been untraceable except by traditional identification of its site. All that the old authorities record of Inverness's death is that he was slain in "Bohgowan," which is supposed to be the Gaelic for "a man's hut," and the person who slew him was Macheda, the Maarmor of Ross. The site of the castle has not been distinctly determined, but it was probably near Elgin. — Ed.

lish frontier; the Grampians, in the centre of the country; and the Northern Highlands, facing the Hebrides, the Orkneys, and the waters which stretch away toward Iceland. The converse of England, which consists mostly of plains and low hills, the surface of Scotland is nearly all mountainous; and were it not for this rugged land, the United Kingdom would have a mean elevation much below the 715 feet, more or less, now attributed to it; the average altitude of Scotland is estimated at 1250 feet.

These mountains, which are for the most part bare, are here and there clothed with Scotch pines and other conifers. None of them towers to giddy heights; in the Southern Highlands, which boast of possessing the loftiest village in the kingdom, Mount Merrick reaches an altitude of 2764 feet; in the Grampians, Ben Nevis, although the monarch of the British archipelago, rises only 4406 feet above the sea; nevertheless, it looks down imposingly on the Glenmore, or Great Glen, a very long and narrow fissure between the Grampians and the Northern Highlands. This remarkably clean-cleft fracture extends from the Frith of Lorne to the Moray Frith, from waters which nearly touch Ireland to the coast from which one could see, were the distance less, the fortress of Norwegian mountains rising precipitously out of the waves. In the depths of the Glenmore runs the Caledonian Canal, 60 miles long, composed largely of constricted fiords and lakes linked together by fragments of rivers; this passage between the Atlantic and the North Sea, more than merely outlined by Nature, has profited especially by the wonderful Loch Ness, the greatest depth of which is not less than 774 feet, between sheer walls of 1800 feet; Loch Ness is a little Saguenay; it is very long, but seldom measures more than seven-eighths of a mile from shore to shore. In the Northern Highlands, Ben Attow has an elevation of 3773 feet.

Under a sky which is rarely cloudless, at least on the western slopes, the rills trickling in the west of heather unite in limpid rivers, which delight to rest on the bosom of a lake, after having grown weary in the moil of rapids, the lost labor of eddies, and the mad plunge of water-falls. The Tweed serves as a boundary line between Scotland and England; the Clyde is famous for its historic associations, the scenery of its upper valley, its falls of Lanark, its huge manufactories, its commerce, and the dock-yards of its estuary; the Forth and the Tay terminate in two broad friths; the Dee falls into the North Sea at Aberdeen; the Spey is swifter than the other rivers of Scotland; the Ness flows out of Loch Ness, and empties into the Moray Frith, near Inverness. The Tay, the largest of all these streams (125 miles long, in a basin of 2300 square miles), discharges an average of 4350 cubic feet of water per second; the Tweed has a flow of 2650; and the Clyde, 2475.

Among the almost countless lakes of Scotland, Loch Lomond, containing from 42 to 46 square miles, and 787 feet deep, sleeps at the foot of Ben Lomond (3190 feet); it is near the estuary of the Clyde, to which it despatches the river Leven. Loch Katrine, a reproduction on a small scale of the Swiss Lake of the Four Forest Cantons, once poured all its waters into an affluent of the Forth; but now 60 cubic feet per second are drawn from it by a water-way of aqueducts and tunnels, for the supply of colossal Glasgow. These two lakes are very beautiful, and how many others are embosomed in these stern mountains! Not all are smiling; some are even crabbed, but very few are commonplace. From the farthest burn, born of the bogs and heaths, which enters their extreme upper point, to the river which forms their outlet, their waters slumber at the base of mountains whose ruggedness is never destitute of grandeur; but from the beauty of this gloomy nature, which is oftentimes the beauty of roughness

and neglect, the ancients would have recoiled as from a scene of ugliness; to their souls, accustomed to the light, the Scottish lakes would have seemed hardly worthy of the Picts and Scots, those isolated barbarians dwelling on the confines of the world. However, though the lochs and tarns of Scotland are not resplendent sheets caressed by sunny hill-slopes, they are none the less noble lakes. Before as well as after the hero Fingal and his son Ossian, a long line of poets celebrated their beauties in mystic hymns, melancholy legends, and bold epics; but the monument "more lasting than brass" which these singers thought to raise to the glory of their native heaths will have endured but a few centuries; for the tongue of these bards, the guttural Gaelic, will ere long have totally disappeared.

These lakes lack the beautiful blue or green of clear waters; they are blue only when they reflect back to heaven the blue of a brilliant day; the waves shivered by the winds on their shores are of a brownish or reddish hue: brownish, because the affluents of the lake have passed over bogs; reddish, because they have filtered through the heather-roots. And the rivers, brooks, and torrents are almost all of a dull red, like the lakes; many reach their lochs through boggy glens, and many a little Leman begins and ends in the moor at the foot of a single *ben*. The Scotch mountains have but little variety; they possess few bold, free, well defined peaks, few that stand haughtily alone, few high enough above the others to present to the gaze a clean outline against the horizon; they rise sombre, treeless, and meadowless,¹ and covered with dripping heather, under low, leaden, rain-charged skies.

The Scotch: Lowlanders and Highlanders. — On the 30,902 square miles² of Scottish territory there are 4,033,000 inhabitants; that is, 130 persons to the square mile. The majority of these are Lowlanders or English-speaking Germans, mixed with Celts in ill defined proportions. They are said to be superior to the English of England in build and physical strength, as well as in their loyalty, their dauntless energy, seriousness, and studiousness; but egotism, bluntness, bigotry, intolerance, and narrowness often ruin these strong natures.

The country inhabited by the Lowlanders, owing to its wealth of coal and iron, has become a colossal factory; at the same time it is a dock-yard unrivalled throughout the world. It is likewise a land of seafarers, of fishermen, sailors, and mighty mariners before the Lord; and yet the Lowlands have few fiords. The Highlands, which abound in friths, produce few navigators; with certain notable exceptions, men of Celtic origin have never been fond of ocean life; they are chiefly of pastoral habits, but, when compelled to do so, they till the soil.

Among the Highlanders, there are only 232,000 individuals who still retain the dialect of their Celtic ancestors. The line separating the Anglophones from the Gaels runs from the Frith of Clyde to the Moray Frith, describing a semi-circle with the convexity toward the east, and taking in the elevated valleys of the Forth, the Tay, the Dee, the Don, and the Spey; Scotland is thus divided into two nearly equal parts, with the English speech prevailing in the low, temperate, fertile, and populous section, while Gaelic is confined to desert glens, bogs, and naked ridges. It was banished after the eleventh century from the palace of the kings, and it has been steadily retreating ever since, especially since the Reformation; it continues to be spoken in a

¹ Except on the eastern coast, where there are noble forests and green pastures, although the rainfall is much scantier there than on the western shore.

² This was the total area in 1881, according to the Ordnance Survey. The area of foreshore was 485 square miles, of water 631, and of land-surface 29,786. — Ed.

portion of the counties of Bute, Stirling, Dumbarton, Perth, Aberdeen, Banff, Elgin, Nairn, and Caithness, and it is used almost exclusively in the Hebrides and in the counties of Argyre, Inverness, Ross, Cromarty, and Sutherland: this last district, although situated at the extreme north of Scotland, is called South Land because the Scandinavians who named it came from the north when they landed on its shores.

The Gaels emigrate in great numbers to British America. There are communities and even entire counties in Nova Scotia, in Cape Breton Island, and in Upper Canada, where Gaelic is more widely spoken to-day than the official English.

The Scotch Celts were divided into clans, or tribes, which were often separated by implacable hates and by centuries of bloodshed. The MacDonalds were the people of the Donald clan, the MacGregors those of the clan Gregor, and so on. Had it not been for relentless feuds between clan and clan, the Highland Celts would have surely extirpated the English from the entire island, and, consequently, from the whole earth. To-day they are reduced to a mere handful, and the attractions of the Lowlands are still farther depleting their ranks. Gaelic families are daily descending into the low countries, to engage in manufacturing; and it is rare that they return to their Highland glens. It would certainly be better for them to stay in their mountains, in spite of the gloomy wildness of nature, in spite of poverty and their more than wretched habitations; in the lowland towns where they bury themselves they are always poor, and many of them become drunkards.

The Highlanders are diminishing from another and a shameful cause; but the shame is not theirs. Many of the Scotch landlords, for the sake of enlarging their hunting parks, purchase all the land that they can lay hold of in the vicinity of their estates, whether pasturage or tilled ground, and then give it over to wild nature; or rather to waste nature, for they have no love for the woods; they even fell the forests sometimes, because the heath is worth more for their game. They drive out the farmer and the shepherd, and replace the cultivated fields, meadows, and forests with heather. The poor Celt, dispossessed of his home, sets out for a Scotch or an English factory town, or emigrates to the United States, Acadia, Canada, the Great West, the North-West, leaving his native glade to the sportsman and his hounds.

The greater part of the Scotch profess Protestantism, which is still active and aggressive here. They are split into sects, some of which are very odd. Scotland sends out many missionaries, and numerous Christian charities scattered throughout the world would perish if it were not for the money sent to them from Scotland.

Scotland shares the supremacy in manufacturing and commerce with England. The Scotch make the most desirable emigrants of the United Kingdom; some 15,000, 20,000, or 30,000 settle annually on English territory, in Australia, Cape Colony, in the United States, and in Canada. In this last country alone they numbered 700,000 in 1881.

Cities. — Four Scotch towns have a population of over 100,000.

Glasgow, the largest, with twice as many inhabitants as Edinburgh, contains 566,000 souls, or fully as many as Liverpool, or as the old Manchester together with Salford; with all its suburban towns, it has a population of over a million, or more than a quarter of all the Scotch. It is traversed by the Clyde, a river 400 feet wide, which broadens out into an estuary; this "lamentable" city, where multitudes of people die in the hovels of lanes and blind alleys, displays to lovers of industrial life two brick chimneys, one 433 and the other 466 feet high, towering in

the neighborhood of 4000 factories. The number of ships built in Glasgow equals or exceeds the number built at any other docks in the world.

Beautiful Edinburgh, the ancient capital of Scotland, is situated on the south shore of the Frith of Forth. Its 261,000 inhabitants (331,000 with Leith) are grouped around the steep basaltic rock which bears the old castle of the kings. It is a city of learning, the parent and nurse of great men.

Dundee (156,000), on the Tay, not far from where it empties into the North Sea, carries on linen manufacturing, ship-building, commerce, navigation, and whale and seal fisheries.

Aberdeen (122,000) is on the North Sea, at the embouchure of the Dee and the Don.

IRELAND.

Mild Climate, Wonderful Verdure. — Ireland, where the number of inhabitants has greatly diminished within the last half-century, has at present a population not exceeding 4,700,000, on an area of 32,530 square miles; an eighth of this surface has scarce an elevation worthy of the name of mountain.

Erin, or the Land of the West, as its Erse inhabitants called it, has shores as masterfully carved as any of Great Britain's, especially on the west. Like Great Britain also, it is indebted to the warm, moist south-westerly and westerly winds, and to the tepid sea-current, for a climate of remarkable mildness: Dublin, on the eastern coast, has the same annual temperature as New York (thirteen degrees farther south), and the southern seaboard is on an average as warm, under the 52d parallel, as the American shores are under the 38th. The rainfall of Ireland is greater than that of any other European country, the annual mean being 36 inches, in 227 days, while Great Britain's is 33.3, and that of France only 30.3. So Erin's springs, rivers, lakes, and bogs retain their level with hardly any variation, and the sward, trees, and mosses preserve in summer the marvellous verdure which has won for Ireland her three titles of Green Isle, Green Erin, and Emerald Isle. The country might also have been named the Land of the Ivy; this plant grows here most luxuriantly; the laurel flourishes here, attaining in the county of Tipperary a height of thirty feet, and one of these trees in Dublin is nearly fifty feet tall.

Bogs, Mountains, and Lakes. — **The Shannon.** — Ireland is a low plain,¹ with few forests, though it was formerly well wooded. It is essentially a peat region, the bogs, or peat-swamps, occupying a seventh of the surface. These bogs, tracts of wet land, lakes so numerous that, notwithstanding the insignificant size of most of them, they cover, together, 625 square miles;² meadows, potato-fields, and, over all, the fickle sky, breezes blowing from the seas, constant fine rains, and filmy mists; isolated, naked mountains along the shores, but no elevations in the interior, — such is Ireland.

Carrantual (3414 feet), in the south-west, in the mountains of Kerry, is the giant of the island. At the foot of the Old Red Sandstone range, dominated by this peak,

¹ Mean elevation 403 feet.

² This is somewhat below the usual estimate, which makes the total lake-surface of Ireland 711 square miles: 237 in Ulster, 305 in Connaught, 69 in Munster, and 50 in Leinster. — Ed.

glisten the charming lakes of Killarney and marine gulfs which are prolonged into friths. These lakes are neither Bodensees nor Superiors; the largest has an area of only 8 square miles, with a depth of about 250 feet. On the east of the island the Wicklow *massif* (3039 feet), of granitic, schistose, and volcanic rocks, faces the haughty Welsh mountains across Saint George's Channel. On the north-east, the plateau of Antrim, of volcanic formation, juts out into the sea in the basaltic Benmore Headland, which is not more than 15 miles from a Scotch promontory, called the Mull of Kintyre. Here the two countries, in remote antiquity, were welded together by cooled lava. They may be joined again at some future day by a passage



ROSS CASTLE, LAKE OF KILLARNEY.

through the hard rock; such a passage would be scarcely twice as long as the Saint Gothard tunnel. Not far from this point the tops of forty thousand basaltic columns, closely united into a regular checker-board pavement over which the waves dash, form the famous Giant's Causeway. In the west, the wild granites and schists, which bear the beautiful name of the mountains of Connemara, rise 2688 feet between the Atlantic and two lakes, Lough Mask (35 sq. m.) and Lough Corrib (68 sq. m.), the latter receiving the waters of the former through a subterranean stream, which leaps to the surface at Cong in Vauclisian fountains.

Lough Corrib, though the second largest lake in Ireland, is very much smaller than the reservoir of the Bann, Lough Neagh, which has an area of 153 square miles, but which is shallow. Upper Lough Erne contains 14 square miles; Lower Lough

Erne, dotted with islands, and having a depth of 148 feet, covers 44 square miles. From both of these flows the graceful river Erne. Lough Ree (41 sq. m.) and Lough Derg (50 sq. m.) are expansions of the Shannon, the central river of Erin.

The Shannon bears a certain likeness to the torrents of a country on the opposite shore of the mighty Atlantic, a country inhabited in part by peasants of Irish origin. Like the Canadian streams, the Shannon is as much a lake as a river; as with them, nearly all its descent is made in rapids. Emerging from Lough Allen, at an elevation of 161 feet, it traverses many small lakes, — which are simply widenings in its own bed, — and the two large, elongated basins of Ree and Derg, and then empties its waters at the rate of 7000 cubic feet per second into a lake-like gulf. From the peaceful mirror of Lough Allen to the ocean, restless and gruff, a distance of more than 200 miles, it has then a slope of only 161 feet; and, as its upper and middle courses consist of stagnant sheets connected by placid currents, it is still 100 feet above sea-level when it reaches the point, a few leagues above Limerick, where it precipitates itself in the rapids of Doonas, a seething, whitening flood, close to deep-set Castle Connel, where dwelt the monarchs of the old Irish kingdom of Munster: Ireland was for centuries divided into the four rival provinces of Ulster, in the north, Leinster, in the south-east, Munster, in the south-west, and Connaught, in the north-west.

The Irish: Their Poverty, Their Exodus. — Of the 4½ million Irish, whom we are apt to picture as fair-skinned, seven-tenths are dark. Now, all the conquerors of the island, from the earliest known to us down to the Anglo-Saxons of recent centuries, belonged to rather fair tribes. The ancient Irish nation, the one which preceded under those misty skies the modern invaders whom history tells us of, must therefore have been a branch of the dark whites. Before taking root in the soil of Erin, this people had probably dwelt in the country facing Ireland on the south, across several hundred leagues of sea; that is, in what is to-day called Spain. It is even thought by some that Galicia can be settled upon as the place from which those immigrants embarked who had the chief part in the genesis of the Irish people. It must have been two or three centuries before the Christian era that this olive race of Celtic origin or tongue bore toward the island of red bogs and brown bogs, where it clashed with and vanquished other Celts, who had arrived no one knows when, from no one knows where.

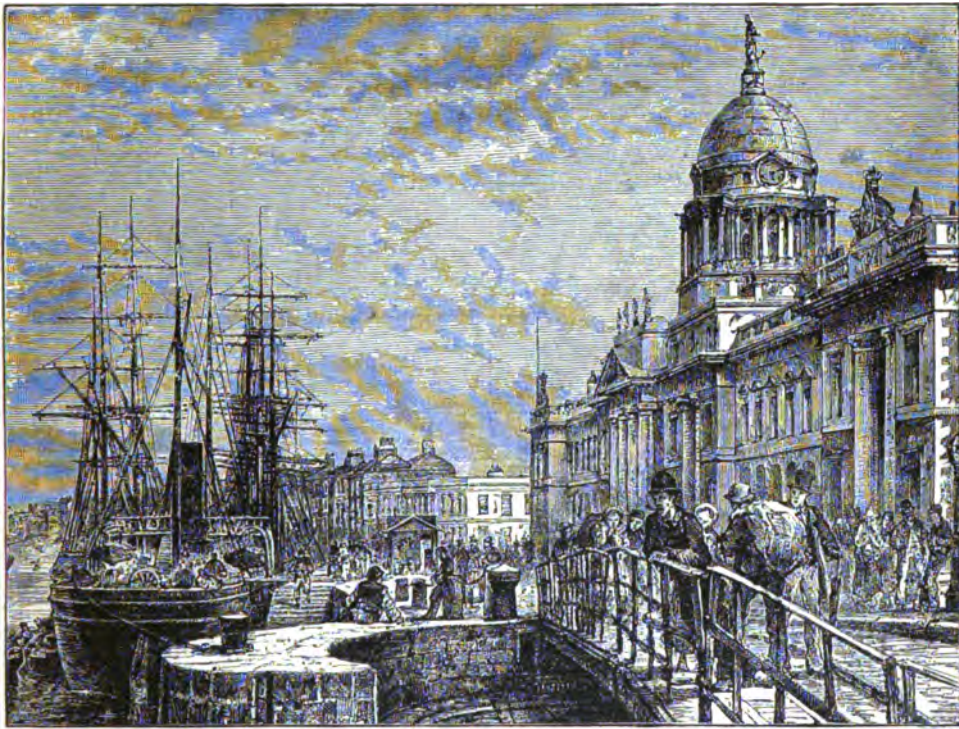
Toward the middle of the twelfth century came the first of those Anglo-Normans who were destined, if not to transform this dark people into a people with fair hair and blue eyes, at least to mix the bloods, and replace the old tongue by the triumphant *patois* which is spoken to-day in every corner of the earth. When the English first set foot on the soil which the bull of a pope had just donated to them,¹ Ireland

¹ This pope, known as Hadrian IV., was named Nicholas Breakspere; he was the only Englishman who ever occupied the papal chair. He was naturally proud to be able to bestow favors on a king of England. In 1155, he granted a bull to Henry II., which contains the following passage: "There is no doubt, and your nobility acknowledges, that Ireland and all islands upon which Christ, the Sun of Righteousness, has shone, and which have received the teaching of the Christian faith, rightfully belong to the blessed Peter and the most holy Roman Church." The pope, believing that the English king would use his power in the interest of the church, granted Ireland to him, while reserving all ecclesiastical rights, and making one penny from each house payable yearly to Saint Peter.

In 1166, Dermot M'Murrough, the deposed king of Leinster, applied to Henry to aid him in recovering his throne. Henry gladly seized the opportunity to assert his claim to Ireland; and he authorized the dethroned king to raise forces in England. Dermot sought the assistance of a Norman noble, named Richard de Clare. This earl, who was afterwards known as Strongbow, agreed to restore Dermot to

was divided among seven clans, and these clans were continually at war with one another, as is always the case when a people has not been kneaded into a compact body by the despotism of a military royalty, or when, for lack of leaders, it has not been cemented into one whole by community of laws, of interests, hopes, illusions, and beliefs. Clearing three or four centuries at one leap, we find Erin subdued, and henceforth subject to English extortioners, at the end of the religious wars which terminated at the protectorate of Cromwell.

About 1775-1780 the population of Ireland was less than 1,900,000 souls. After the introduction of the potato, which is capable of sustaining a greater population from the same land than oats, the Irish increased perceptibly. Already very poor,



A VIEW IN DUBLIN.

and not less heedless, they became still more wretched, still more indifferent to their ills, on the fertile estates, interspersed with peat swamps, which were owned by some thousands of English landlords. So many children came to the thatched mud cabins, these children held out so merrily against poverty, hunger, damp, cold, and filth, that

power, on condition that he should receive the hand of Eva, Dermod's only child, and, according to feudal law, his sole heiress, to whose children the kingdom would naturally pass. But, according to Irish customs, inheritance of estates was impossible, — a fact which was probably unknown to Strongbow. With the Anglo-Norman invasion of Ireland, which resulted from Strongbow's compact with Dermod, began the conflict between tribal and feudal law which afterward deluged Ireland with blood. In later years, in the *Annals of Lough C'e*, the change wrought in Ireland by this invasion of Strongbow was thus briefly but vividly described: "Earl Strongbow came into Erin with Dermod M'Murrough, to avenge his expulsion by Roderick, son of Turlough O'Conner; and Dermod gave him his own daughter and a part of his patrimony; and Saxon foreigners have been in Erin since then." — Ed.

in 1841 there were some 8,200,000 inhabitants in Erin, and nearly 9 million in 1846; that is, in 1841 there were about 250 Irishmen to every square mile, bogs, lakes, and fens included. The Green Isle has lost fully 4 million souls in forty-five years.

Ireland's oppressed and despairing sons have emigrated by hundreds of thousands annually, and they are emigrating still to England, Scotland, Canada, the United States, and Australia; thus, by contributions of ante-Celtic and Celtic elements, they are continually modifying, even in the mother-country, the race which formed the corner-stone of England and her colonies.

On the shores facing northern England and southern Scotland, and in several northern districts corresponding to ancient Ulster, it is not the Irish blood which predominates, but the English and Scotch, for the inhabitants of this small portion of Erin are descended for the most part from Presbyterians who came from Great Britain during the religious wars. Everywhere else, in the centre, south-west, west, and north-west, the genuine Irishman reigns, — a cruel expression when applied to the tatterdemalions of the Emerald Isle.

The Old Irish Language. — But if the national character has been preserved unchanged wherever Saxon elements have not entered into the people, if the Irish pure-blood is fiery and meddlesome, — at least, his English scornors paint him as such, — if he is heedless and fickle, without self-control, easily carried to extremes, quarrelsome, fond of clamor and fights, if he has retained his Catholic fervor, he is nevertheless wholly forgetting his ancient Erse tongue. Before the great expatriation movement, occasioned by the famine (1846), which followed the fatal potato murrain, and carried off more than a half-million men, the Erse-speaking people formed a good part of the inhabitants of the island; but it was among them that emigration made the greatest ravages, and in 1851 fifteen hundred thousand Irishmen at the most understood the national cry of "*Erin go bragh!*" In 1861 not more than one million such remained, and in 1871 only 950,000. The number of persons knowing absolutely no speech but Erse scarcely exceeds 100,000 at the present day. Though the language of Erin received its mortal blow from the exodus, it had already become greatly enfeebled. For two hundred years (1644), these millions of Ersophones had not written a work in their dialect, and Irish verse-making had long since died out. There was nothing, therefore, to fix, strengthen, or keep alive the Erse language, no gay, pleasing songs, no schools, no written laws, no Sunday and fête-day sermons, for the priests preached more and more in English. From generation to generation, we might almost say from year to year, the distance between the ancient tongue and the current speech widened, until now it is the vast gulf which seemingly can never be spanned.

Three dates, almost three centennials, tell the story of this gulf: —

In 1541, it was in the Erse tongue that the Dublin parliament debated; it was in Erse that this parliament offered the title of King of Ireland to fierce Henry VIII. of England.

In 1644 appeared the last book in Irish Celtic.

In 1846 the exodus began.

In 1900, or a little later, the *Erionnaich* (they call themselves thus) will have ceased to exist, and the history of old Erin will be almost a foreign history to modern Irishmen. Already the east of the island is Anglophone. The Ersophones, though nearly all bilingual, hold out still in the north (county Donegal) and in the west, especially from Sligo Bay to the estuary of the Shannon, in the counties of Sligo,

Mayo, Galway, and Clare. There is not an Erse newspaper published in the world, neither in Ireland, where half the population spoke Celtic at the beginning of this century, nor in the United States, where the Celts form a leading element in many large towns, — notably in New York, — and where there is already more Irish blood than in Ireland itself, nor in the Dominion of Canada, where the Irish numbered nearly 960,000 in 1881, nor in Australia, where their name is legion.¹

Nearly four-fifths of the Irish are Roman Catholics. The Protestants dwell principally in the north-east, in the Belfast and Londonderry districts, which were long ago settled by the English and the Scotch.

Cities. — Two Irish cities have more than 100,000 inhabitants.

Dublin (353,000),² or the "Black-pool," on the eastern coast, at the mouth of the Liffey, at the northern base of the mountains of Wicklow, nearly faces Liverpool across the Irish Sea. This capital of the island is bereft of her kings and her parliament. She has few manufactures, but great numbers of ships enter and leave her harbor.

Belfast (256,000), also on the eastern seaboard, lies at the upper extremity of the estuary of the Lagan; linen is manufactured here extensively, and the commerce almost equals that of Dublin.

Cork, a port of the southern shore, on the Lee, at the head of an estuary, contained at one time more than 100,000 inhabitants, but this number has diminished with the decrease of population in the island itself.

Small Islands. — The three islands of Wight, Anglesea, and Man are dependencies of England, as are also the Norman or Channel Islands; these last are near neighbors of France, and have remained faithful to the French tongue.

Wight (145 sq. m.; pop. 79,000), a most charming island, presents a type of English scenery in its freshness and grace; it faces Portsmouth, a great naval port, and Southampton, an important commercial port; the strait which isolates it from the mainland is less than two miles broad. Its girdle of waves gives the island a mild climate, and it is these waves that rear its villas and châteaux, and draw hither in the summer throngs of idlers and bathers.

Less attractive than Wight, though possessing as mild a climate, Anglesea (303 sq. m.; pop. 50,000), in the Irish Sea, almost touches Wales, and two bridges span the very narrow arm of the sea which separates it from Carnarvon. With its gardens, meadows, and fields, and with its copper mines, this once "shady land" has become a land without shade. Two thousand years ago the island was named Mona; at that time, people flocked, it is said, from Great Britain, from Gaul, from beyond the Alps even, from all Celtic countries (so extensive then, but so insignificant to-day), to Mona's black forests as to the most venerated shrine of the Druidical religion.

Man (227 sq. m.; pop. 55,600) was until 1829 the property of the dukes of Atholl. It rises out of the Irish Sea nearly equidistant from England, Scotland, and Ireland; in a clear day all of these countries can be seen from the summit of Snowfell (2000 feet). No point on this small world is more than six miles from the encircling billows which beat violently against its limestone headlands and remorse-

¹ Though technically correct, this statement should, perhaps, be modified. There are several journals in this country, — and at least one in Ireland, — which either have Gaelic departments or are published in whole both in Gaelic and English. — Ed.

² These figures include the population of the outlying townships of Rathmines and Rathgar, Kingstown and Pembroke, Clontarf and Dalkey. — Ed.

lessly drown its fishermen. The winds from the north are arrested by the mountains of Scotland, and never reach the island; the Welsh mountains protect it against easterly gales; the winds are, then, all southerly and westerly, and these bring warmth and moisture. The winters are exceedingly mild; in the month of January it is not as cold in the Isle of Man as in Rhodes, which lies between the Nile and the Bosphorus. The genial climate, the small harbors in the wild, superb cliffs, and the rugged beauty of the mountains, attract a multitude of visitors and bathers to these shores in the sunniest season. The Manx are engaged in sheep-raising and the herring fisheries. They have for the most part abandoned their Celtic dialect, and the few thousands who have remained faithful to it speak it in a much corrupted form; three-fourths or four-fifths of them at present understand nothing but English, and yet in 1600 they knew only the old tongue, which was intermediate between the Celtic of Scotland and the Celtic of Ireland. There are perhaps not more than a hundred persons in the island to-day who are absolutely ignorant of the language of London, and there is no preaching in the Manx dialect anywhere except in the church of Arbory. The great town, Douglas, has 15,000 inhabitants.

The Norman islands are separated from the French peninsula of Cotentin by the Race of Alderney, a narrow channel rendered very dangerous by raging winds, currents running ten miles an hour, eddies, shoals, and rocks.

These islands, to the number of four, are: Jersey, the largest and most populous, and the one nearest France; Guernsey, much smaller than Jersey; Sark and Alderney, which are nothing but islets. The total area does not exceed 75 square miles, but, owing to the fisheries, commerce, and coasting-trade, and also to the villas where strangers come to seek a clement winter, the inhabitants number 88,000, or some 1170 persons to the square mile, an almost city-like density. For those who can dispense with glowing sunshine, it is a delight to live here in a little paradise of green hedges on the cliffs swept by the sea-breezes. Though English is spoken at Saint Helier's, the capital, and in the other cities, French, in its old Norman dialect, is still the language of this little Normandy.

The Scilly archipelago is a group of 24 islets and reefs, 5 of which are inhabited; they have a population of 2000, on 56 square miles. They whiten off Land's End on a crashing, storm-tossed ocean where the winds are at rest only six days in the year. But these winds bring hither sea-warmth and never cold nor ice nor snow.

The Hebrides and the Orkney and Shetland groups are Scotch archipelagoes.

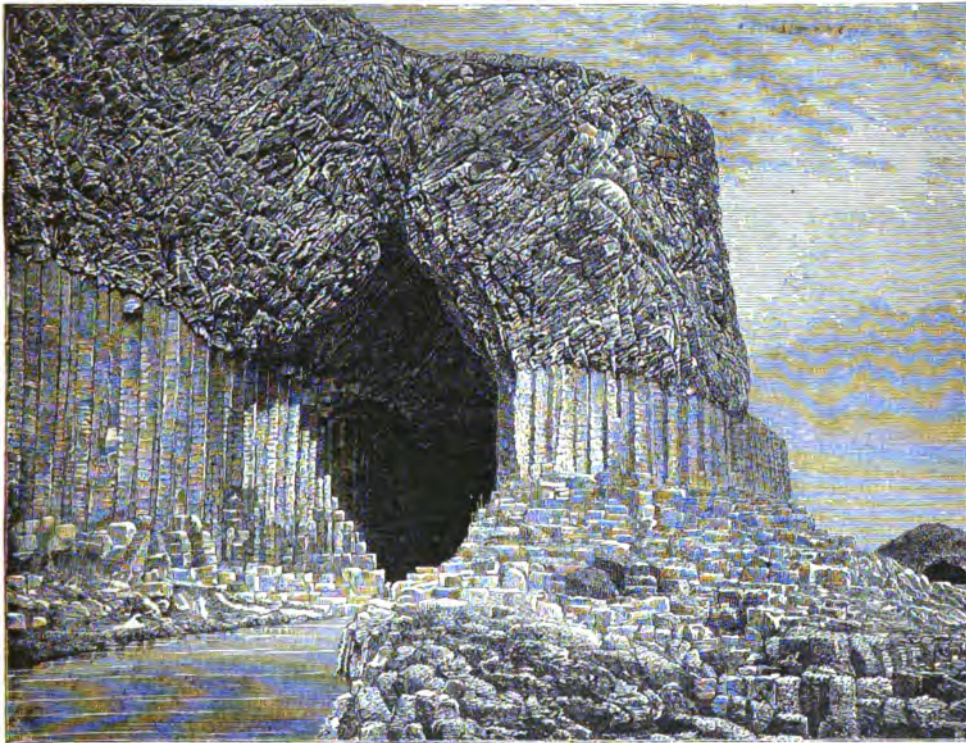
On the western shore of Scotland, the Hebrides, rock-ribbed, misty, rainy, and tempestuous, recall the grand and gloomy nature of the Scotch mountains. The northernmost, Lewis, is the largest, having an area of 770 square miles. The volcanic Skye (687 sq. m.), a detached fragment of the mountains of Inverness, bears the highest *ben* in the archipelago, 3167 feet, in the Cuchullin Hills, a range of rigid, sharp-pointed, fantastic, almost inaccessible eminences. Mull (350 sq. m.), nearly as lofty, volcanic also, is near the coast of Argyle; among her neighboring islets she proudly names Staffa, which opens to the sea, through a magnificent portal 115 feet high and 52 broad, a cavern in the basaltic rock, with ranges of regular columns, around which the lights and shadows play, the winds moan, the waves splash and murmur, and the tempest roars with mighty fury. This is Fingal's Cave.

The Hebrides were formerly called *Innis Gael*, the islands of the Gaels; they still merit this appellation. The Scotch Celts have nowhere else so well preserved their

race and their language; but English is beginning to assail them, it is knocking at the doors of their schools, and a day will come when the motto *Tra mor, tra Briton*¹ will have proved a falsehood there as elsewhere. The Gaels of the Hebrides are shepherds, fishermen, seamen, hunters of sea-birds and eider-down collectors; they number nearly 115,000; the aggregate area of the islands is about 3000 square miles.

The Orkneys (375 sq. m.) rise out of a boisterous sea close to the northern coast of Scotland. They are much less elevated than the Hebrides, the chief peak being 1555 feet high. Pomona (212 sq. m.) is larger than the 75 other islands of the archipelago combined. Twenty-eight of the group are inhabited.

These islands produce no large trees, for, notwithstanding the surrounding waters,



FINGAL'S CAVE.

the influence of the North is fatal there. Under the 60th parallel, an essentially Siberian latitude, we cannot expect nature to have an excess of life juices; nevertheless, the mean annual temperature approaches 48 degrees F. Only one hundred sixteen days have genuine nights; the remaining two hundred forty-nine succeed one another through long twilights that terminate with the first glimmerings of long dawns.

The 32,000 Orcadians cannot live on the products of the beautiful meadows that cover their Old Red Sandstone surface: they fish for herring and cod, and hunt the sea-bird.

¹ "As long as the sea, so long the Briton."

Fifty miles to the north-east of the Orkneys, on the bosom of vicious billows, something over 100 islands, 34 of which are inhabited, form the Shetland archipelago (550 sq. m.) These are usually hidden by fogs from the seaman who seeks or shuns them. High cliffs (reaching even 1000 feet), elevations of less than 1500 feet, *holms*, *skerries*, and *stacks*,—or, in other words, islets and reefs,—peat-bogs, moors, one tree (and that not more than 7 or 8 feet tall),—here we have a picture of the Shetlands. They amaze us by their verdureless rocks, their grottos into which the sea enters roaring and thundering; they sadden us by an unending procession of clouds. The rainy, windy climate has a mean of 45 degrees F., in spite of the high latitudes; long-haired horses of the size of small asses, sheep, and diminutive cows pasture on the grass, which grows thick in the valleys, but is scant and short elsewhere.

The 30,000 Shetlanders, like the Orcadians and the Hebrideans, live as much off the sea as the land. Like the Orcadians, they formerly spoke the Norse tongue, for the sources of their blood were in Scandinavia. They are the descendants of the Norse vikings who, for a long time, invaded and plundered the territory of Great Britain. One hundred years ago, a few Orcadian families still understood the ancestral language, which began to decline after the reign of Charles II., when a "Society for Christian teaching" opened English schools.

SCANDINAVIA.

The Baltic.—**The Future Saint Lawrence of Europe.**—¹The Scandinavian peninsula is inhabited by two federated peoples, the Swedes and the Norwegians, who are of the same lineage, although they speak different languages and have but an indifferent friendship for each other. They will perhaps separate at some future day, and they will then realize that they are brothers in Scandinavia.

Three seas make this country a peninsula, namely, the Atlantic, on the west, the Danish waters,—a succession of straits leading from the North Sea to the Baltic,—on the south, and on the east the Baltic, with its *skären*, a long, dusky retinue of granitic and gneissoid islands faithfully attending the shore.

The Baltic, the Eastern Sea of the Germans, terminating at the north by the *cul-de-sac* called the Gulf of Bothnia, separates this peninsula from lands which are to-day Russian or Prussian, but which for long years revolved in Scandinavia's orbit: these are Finland, which was Swedish down to 1809, and which is Swedish still in the speech of 330,000 Finlanders; Esthonia, Livonia, Courland, East Prussia, and Pomerania. The Baltic is comparatively shallow.¹ Its greatest depth, between the island of Gottland and Vindau on the coast of Courland, is only about 800 feet, or less than that of the Lake of Geneva; if the sea and lake should be emptied at equal rates, over three hundred feet of water would be left in Leman's chalice when every drop of salt water had been drained from the Baltic; the sea would have become dry land, studded with lakes, joined by a mighty river. It is certain to be reduced to such a stream, unless in the course of the centuries something arrests the progress of the alluvia. We christen this river in advance

¹ Mean depth, 220 feet.



THE RJUKANDFOS.

the Saint Lawrence of Europe. The formation of the deposits is much impeded now, owing to the numerous lakes in which the streams of Sweden, Lapland, Finland, Russia, and Prussia are purified; so every granite basin which is filling up in the circuit drained by the Baltic is doing its part in delaying the time when in the far-off ages this sea shall be transformed into a river.

Climate. — Mountains and Snows. — Scandinavia embraces about 300,000 square miles of surface,¹ and contains a population estimated at 6,775,000, or less than 23 persons to the square mile. What is this extraordinary dearth of inhabitants due to? To the mass of mountains, the magnitude of the lofty plateaus, the extent of the lakes and swamps, and also to the severity of the climate. Situated in the extreme north of Europe, this peninsula extends far beyond the Arctic Circle, within which it possesses fully 60,000 square miles, while on the south it does not reach even the 55th parallel. We call the climate of the country about Christiania, in Norway, and along the Götha, in Sweden, temperate; but, in order to flatter these regions thus, we must forget that on the Mediterranean, in Europe, there is a warm, sunlit, flowery, fragrant coast whose climate bears this same title of temperate; a coast which is surely gilded by another sky than that from which so much snow falls on the icy forests of Scandinavia.

Mountains, which give the peninsula a mean elevation of 1404 feet, extend over two-thirds of its surface. The Alps of France, Italy, Switzerland, Germany, and Austria, combined, comprise less than half the area of the Swedish and Norwegian masses. The latter have a length of 1136 miles, while the distance from Nice to Vienna, measured along the arc of the circle described by the Alps, is less than 750 miles; the Scandinavian mountains embrace 202,000 square miles; that is, as much as the Alps, the Pyrenees, the mountains of central France, and the Apennines united. And these Lang Fjelde, this Dovre Fjeld, these Kjölen, — all this boundless world of escarpments and convexities, instead of being rent in peaks that tower into the skies, stretches out in dismal undulations, in plains that are polar owing to their elevation, in naked wastes, puny forests, limitless snow-fields and glaciers, some of which, on the north, descend to the very shore of the Norwegian sea. There are in this double kingdom of *Norge* and *Sverige* 7050 square miles of persistent snows, or sixty-five times the extent of the glaciers of Mont Blanc.

It is in Norway that the Scandinavian snow-masses are most numerous and most vast. They are the largest in Europe, outside of Iceland, and they are far greater than those of Switzerland and the Tyrol. The most celebrated, the Jostedalshrac, north-east of Bergen, crowns a plateau 56 miles long, supported by the cliffs which

¹ SCANDINAVIA.

	AREA IN SQ. MILES.	POPULATION.
Sweden	173,974	4,774,409
Norway	125,651	1,990,000
Total	299,625	6,774,409

The areas given here are from Strelbitsky's *Superficie de l'Europe*; the population of Sweden is taken from official reports for Dec., 1889, that of Norway is the estimate for Dec., 1888, adopted by Drs. Wagner and Supan in their recent compilations of population statistics. Norway census, 1891, 1,999,176.

bound the narrow horizon of Sogne Fjord on the north; it contains 350 square miles;¹ from its cold, pure substance it feeds glaciers, some of which descend almost to the water's edge; one of them reaches a point only 426 feet above sea-level. Nearer Bergen than is the Justedalsbrae, south-east of this city, the Folgefon, fastened to its mountain by the tentacles of Hardanger Fjord, spreads out in a white desert of 108 square miles, at an altitude of 4500–5000 feet. In the north of the country, the Store Børge Fjeld bears on its shoulders a snow-mass of 147 square miles; and farther on, under the polar circle, the Svartisen, or Black Snow, 40 miles long, at an elevation of 3000–4000 feet, has an area of 270 square miles.

From east to west, or, more accurately, from south-east to north-west, Scandinavia rises imperceptibly, and then plunges suddenly into the ocean, so that this rugged peninsula has been compared to a colossal wave, congealed at the moment of breaking its volute: the long, upward slope of the wave is Sweden; its crest and steep declivity form Norway.

No summit rising from the dreary expanse of the *viddene*, or wastes, from the *heder*, or heaths, from the *ffjeldene*, or snow-masses, from the *braer*, or glaciers, attains an altitude of 13,000–15,000 feet, as in the Alps, nor even of 10,000. The loftiest of all are: Ymes Fjeld, or Galdhöppigen, in the Jotun Fjelde (Mountains of the Giants), 8400 feet high; Snaehaetten, in the Dovre Fjeld (Dofrines), 7566 feet; Sulitjelma, in the Kjölen, 6168 feet. This last is within the Arctic Circle, in the realm of the Lapp and the reindeer.

Fjords, Rivers, Lakes, and Water-falls. — Rivers, all far larger than we should expect on account of the shortness of their courses and the limited area of their basins, and torrents often blackened by peat or stained red by iron, bear down to the sea the tribute of the snow-masses, glaciers, and lakes. Calm, sluggish streams, or chafing torrents, flow into the Baltic, on the east, into the Danish sea, on the south, and into the Norwegian fjords, on the west. The fjords are the triumph of the wild nature of the north. At their entrance is the living sea, with its flood and ebb, its hull, its bluster, and its tempests. In their deep recesses the waves are stiffened with ice; for these solemn clefts open between mountains that rise 3000, 4000, and even 5250 feet (in the Hardanger Fjord), and the mountains are not always too steep to afford here and there a bed for glaciers and asperities for the snow.

From the *névés* and the ice water-falls descend at an altitude of several hundred feet, sometimes of several hundred yards. They are shattered on waters which often surpass in depth the height of the fall; for in many a fiord it is 2600 feet from the level of the sea to the bottom of the abyss; in soundings in the Sogne Fjord the plummet failed to touch bottom even at a depth of 4080 feet. These estuaries are so numerous, some penetrate so far and with so many ramifications into the interior of the land, that Norway has a coast-line of 12,500 miles, including the channels of the islands, instead of the 1190 miles that it would have but for the indentations. Among these anfractuosités, the shades of which are never wholly dispersed even by the mid-day sun, the Bukken Fjord and the Lyse Fjord deserve mention; both are near Stavanger, in southern Norway. They are long constricted fissures in cliffs 3300 feet high, with a depth equalling or exceeding the breadth of their narrow passes.

The Scandinavian rivers, more especially the Swedish, delight to repose in lakes. Many of these sheets are very beautiful, and some of them are very large. Lake

¹ Professor H. Mohn, of the Meteorological Institute, Christiania, gives the area of the Justedalsbras as 580 square miles. — Ed.

Wenner (2150 sq. m.) receives the charming Klar Elf; Lake Wenner gathers the tribute of 18,000 square miles of Swedish or Norwegian territory,—that is, of 2000 square miles more than the total area of Switzerland. Its surface is more than ten times that of the Lake of Geneva; but it is only one-fourth as deep. Its Rhone is the Götha, which carries an average of 18,470 cubic feet of water per second. Lake Wetter (733 sq. m.), 413 feet deep, feeds the beautiful Motala, the river which supplies the factories of the Scandinavian Manchester, Norrkjöping. Lake Mälär (449 sq. m.) is 194 feet deep. This is the Lake of Stockholm; 8420 square miles are drained by it. Lake Mjösen is unrivalled in Norway. It is 60 miles long, with a surface-area of 140 square miles, and a depth of 1483 feet. Its bed is 1083 feet below sea-level; its outlet flows into the Glommen. The total area of the Swedish lakes is estimated at 14,009 square miles, and that of the Norwegian lakes at 3951; in all, 17,960 square miles, or fully a sixteenth of Scandinavia.

These rivers, which expire so willingly in the passive Lemans, are noisy, angry torrents, leaping in terrific cataracts from lake to lake, or from lake to sea. In Sweden the fall of Njuommelsaska, on the Luleå, is 262 feet; that of Elf Karleby, on the Dal, near where it enters the sea, is 49 feet, and the volume of water is immense, the Dal being one of the principal streams of Scandinavia. The Trollhättan clears 108 feet in three leaps of the river Götha.

The Norwegian cataracts are far grander than the Swedish. Here, it is a ribbon of water 2000 feet long, floating with the wind, and the snow-born torrent appears to drop from heaven as it falls in rain-dust on the rocks of an amphitheatre, the surface of a lake, or the waters of a fiord; there, a river buries itself in a gulf so deep that one descends into it at the peril of his life, only to feel in the abyss his own nothingness, beneath a wild uproar that seems to betoken the downfall of nature. It is thus that the Maan plunges 804 feet by the Rjukandfos,¹ in its course between Lake Mjös and the steep-banked Tyn. The river Tyssø, in its rugged route toward the Hardanger Fjord, precipitates itself 525 feet by the Tyssøstrengene and the Ringedalsfos; the Bjøreia, a sub-affluent of this same Hardanger Fjord, descends 474 feet in the famous Vöringfos. In other places, the water clears but a few yards, and is immediately imprisoned again between its rocks. But even then it is sometimes a Rhine that falls; for many a Norwegian stream, with its short course and contracted basin, carries a very large volume of water, derived from the snow-covered plateaus and from the lakes. Among water-falls of this latter class (they are not the least attractive), that of Sarpsfos breaks the Glommen River, making a plunge of 69 feet. The river (354 miles long), the most important one in all Scandinavia, discharges an average of more than 28,000 cubic feet per second,—4400 at low water and 140,000 in the greatest floods.

If we except a few valleys of southern Norway and southern Sweden, where the soil possesses some fertility, and where the climate has a certain degree of mildness, almost everything in both countries which is not snow, nor ice, nor lake, nor swamp, nor peat-bog, nor barren, waste plateau, nor precipice, pertains to the Skog; that is, to the great forest, or, at least, to what was once wooded land, but which is now too often no longer such. The Scandinavians are assiduously and insolently felling the trees, regardless of the future. They will be punished in their posterity; for it would require a hundred years in their cold clime to create from their hard

¹ Fos, in Danish, signifies water-fall. Danish words can very properly be employed to designate Norwegian objects; for the official and literary language of Norway is Danish.

soil trees like those which they are cutting down. Beauty will be turned into ugliness, and wealth into poverty. The water-falls are accomplices in this brutal work. Along the banks or near the abyss of the cataract, at the Trollhättan, at the Sarpsfos, in a hundred other localities, are enormous factories, board enclosures, huts piled one above another, and hanging sheds. These resound with the gnashing of saws, in the foam of a torrent that would roar with its own fall if the Northmen had not deflected it from its path to the abyss, above the first rapids of the *elf*, or *elv*. And numberless trees enter these saw-mills, to be converted into logs, beams, planks, and sawdust. Thus, the cataracts are diminished by the seizure of the waters, defaced by wood structures and machinery, and profaned by the bustle of man; and the blind force stolen from them is hastening the destruction of the forests.

Sweden and the Swedes. — In Sweden there are 4,774,000 inhabitants, on 174,000 square miles, or 27 persons to each square mile. The nation is growing, and it would increase much more rapidly if it were not for an incessant emigration to the United States. The single year of 1888 witnessed the departure of 50,000 men. Nearly all of these Swedes choose that part of the United States which most closely resembles Scandinavia. They make their homes largely in Michigan, Wisconsin, and Minnesota. Others, though in much smaller numbers, accompanied by Danes and Norwegians, settle among the Mormons, on the high plateau of Utah. Of all Europeans, the bilingual nation of the rugged peninsula is, with the Danish, the one which furnishes the greatest number of proselytes to the religion of the modern polygamists.

The forests proper occupy about 67,500 square miles, the lakes more than 14,000, the meadow lands 10,400, and the gardens and cultivated tracts 5800; some 73,000 square miles, then, remain for wastes, heaths, swamp-moss, and sinister woods. Fruit-trees, gardens, ploughed fields, and meadows constitute the competency of peninsular Sweden, that is, of the portion comprised between the Skager-Rack, the Cattegat, the Sound, the Baltic, and a line traced from Christiania to Stockholm; the greater heat of the sun, the less frequent rains, the genial temperature of the sea, and the broad sheets of calm water, — those reservoirs of warmth and moisture, — give southern Sweden something of the aspect of western France (except for the lack of lakes in the latter); and in certain quarters the population of the peninsula is as dense as that of France. But north of Stockholm we find half-desert districts and then deserts, in measure as, advancing northward through regions rich in iron mines, we pass the Dal, the Ljusne, the Ljungan, the Indals, the Angerman, the Umeå, the Skellefteå, the Piteå, the Luleå, the Kalix, and the Torneå; these *elfvar* of 5000, 7000 to 9000 cubic feet per second are torrents and lakes in turn. But for the scantiness of the rainfall the streams of Sweden would have a much greater volume, for the rocky bed absorbs none of the waters, the skies are too chill to evaporate them, and they are fed from vast reservoirs. The annual rainfall is only 16 inches (in the north) to about 27½ inches (in the south).

The Swedes are fair and tall; their language, which is allied to the German, would be by far the most beautiful of the Germanic dialects if distant Iceland had not preserved her old Norse tongue. The Swedish combines stately sonorousness, strength, richness, plasticity, and poetic grandeur. Outside of Sweden it is spoken on the coast of Finland. Not only is Sweden attached to Finland by historic memories and the survival of the speech which she carried thither, but in winter she is joined to this former dependency by a material bond. The shallow, nearly fresh sea which separates the two countries is sometimes frozen from shore to shore, for many months in

succession, with ice strong enough to bear the convoys and sledges from Sweden to the Russian archipelagoes of Aland and Abo, and from there to the coast which is now a holding of the Czar of all the Russias.

Lutheranism, a form of Protestantism, prevails almost exclusively in Sweden.

Only two Swedish towns contain over 100,000 inhabitants; one is Stockholm, the capital, a city of 243,500 souls. Like Venice, it is a city of the waters. The sun of the south is wanting here, as well as famous monuments, poetic renown, the souvenirs of a glorious history, and the melancholy shadow of lost fame; but Stockholm is not built like the queen of the Adriatic on malodorous, stagnant lagoons, facing a low coast; it mirrors itself, in the presence of forests, in the clear waters of Lake Mälär, which encloses thirteen hundred islands.

Göteborg (103,000), a busy port, on the Cattegat, derives its name from the arm of Götha, along whose embouchure it lies.

Upsala (22,000) and Lund (15,000) are the two university cities.

Norway and the Norwegians.—Including the wastes, moors, fiords, chasms, and forests, Norway covers some 125,000 square miles; the population scarcely reaches 2 millions, making an average of about 16 persons to the square mile. It is the most sparsely peopled country of Europe. Towns are rare, and the traveller often journeys for leagues without seeing one. They are all built of wood. Of Norway's 125,000 square miles of territory, 24,700 consist of woods strangely interspersed with crags, lakes, glades, and elevated pasture-grounds; 4500, of meadows; 1550, of arable soil (the latter number augmented annually by 12 square miles, at the expense of the grass-lands); the lakes occupy a little over 3900 square miles, and all the rest is rock, snow, and wilderness. It is evident that the Norwegians can utilize only a very small part of their land surface. The sea, however, breaks on countless reefs at their gates, the fiords are everywhere, and both fiords and sea are stocked with inexhaustible supplies of fish; so it happens that, out of 2 million Norwegians, 1,200,000 dwell along the shores; one half of these are on the sea-coast itself, and the other half on the estuaries and in the islands.

The climate of Norway is milder than that of Sweden at equal altitudes and in the same latitudes. This difference is due to the more abundant rains of the former country. The mean annual rainfall of Norway ranges from 20 inches (in the south) to 92 (in the north); but the variation between the two extremes is much greater, some of the enclosed plateaus receiving only 14 inches, while on certain fiords and tributary fiords at the base of the Jostedalstraek the fall is 108 inches. The mean annual temperature of Lister, the warmest section of the country, in the extreme south, is 45.3° F.

In 1665, Norway had only 460,000 inhabitants; in 1769, they numbered 730,000, and at the beginning of the present century 885,000; the population has, therefore, more than doubled in eighty years, yet emigration is now affecting it. In two years, 35,000 persons have embarked from this country for the United States.

For centuries Norway was united to Denmark; but since 1814 it has been associated with Sweden. The Norwegians are tall, and nearly all blue-eyed and fair-haired. Like their Danish brothers, they overran the world for long generations, skimming the seas in bold barks, plundering the coasts and the banks of the streams *pour gaigner*, as they said in the French of those days, that is, in the language adopted by that most fortunate of their bands, the one which gained Normandy, England, and Sicily. Another band discovered Iceland, and later reached America. The land

of the Northmen no longer sends out her daring sons to the conquest of the world. She covers the seas with mariners, she exports her woods and those of Sweden to all quarters of the globe, and for her share in colonization she is aiding in the peopling of the American Great West — Michigan, Wisconsin, and Minnesota.

The Norwegians profess Lutheranism. Their written language, the language of assemblies and of society, is the Danish; this is the most corrupted of the Scandinavian tongues. The use of Danish is due to the long supremacy of Denmark over



TYPES AND COSTUMES OF LAPLAND.

Norway. But, side by side with the Danish of literature, of the newspapers, and of public meetings, scores of dialects exist, which differ but little from one another, since they are all legitimate descendants of the ancient Norse.

Norway contains only one town of 100,000 inhabitants. Christiania (150,000),¹ the capital and principal port, is situated at the extremity of an elongated fiord, in the most favored part of the country; it is in the south, near the Glommen, the largest Norwegian river, and not far from the beautiful Lake Mjøsen. The fiord is said to be very charming.

Lapland and the Lapps. — Lapland is the north of Sweden and Norway, and also of

¹ The city limits of Christiania were extended in 1878. The population in January, 1891, was 150,444. — Ed.

Finland. The inhabitants are composed of Scandinavians, whose numbers are constantly increasing, and Lapps, who, according to some ethnographers, are of Finnic origin, and according to others, of Mongolian; in any event, they speak a Finnic tongue, which is clearly related to that of the Mordvinians of Russia. On a territory of 150,000 square miles, there are scarcely 31,000 men. The Lapps are yellow-skinned, with black hair, scanty beards, protruding cheek-bones, and small eyes, dulled by the glitter of the snow and reddened by the pungency of smoke; they are very uncleanly in their persons; they have passed for a long time as the most diminutive race of mankind; still, although many of them are not over four and a half feet tall, those of five feet and more are not extremely rare. Some of them fish in the fiords, lakes, and torrents; others live, with their reindeer, in the depths of forests that are half buried in snow during many months each year; these sombre woods are composed of birches, alders, juniper-trees, and willows; they are interspersed with peat-bogs and tracts of yellow and reddish lichens. Wretched is the life of these stunted children of the north, grappling with the snow in winter, and defending themselves from the mosquitoes in summer. When the milder weather has loosed the torrents, unsealed the lakes, set the cataracts in motion, and dissolved the icy pavement of the swamps, gnats and other winged darts buzz by millions upon millions in the dried-up fens. At this season the Lapp besmears his face with fat, or flees with his reindeer to other moss-fields, on which the herd can feed. These movements are nothing short of emigrations; for no family lives well without some hundreds of reindeer, and a rich man often owns more than two thousand.

The Lapp does not confine his roving to Scandinavia along with the Norwegians and Swedes. We encounter him in Russia, west of the White Sea, mixed with Finlanders, Scandinavians, and Slavs. He is everywhere insensibly passing from the nomad to the settled state; everywhere he is falling back before the stronger races that come to dispute with him the possession of his fish and his bits of meadow land, even under the long shadows of the polar night; but if these people are retreating or are being absorbed, they are by no means disappearing. At the end of the last century there were less than 10,000 of them, while to-day, including Lapps and the men of mixed blood, they number more than 30,000. They call their country *Sameanda*, their language *Samegierl*, and themselves they name *Same-lats*. In former times, this diminutive race roamed over the Scandinavian peninsula, Finland, Denmark, and as far as northern Germany.

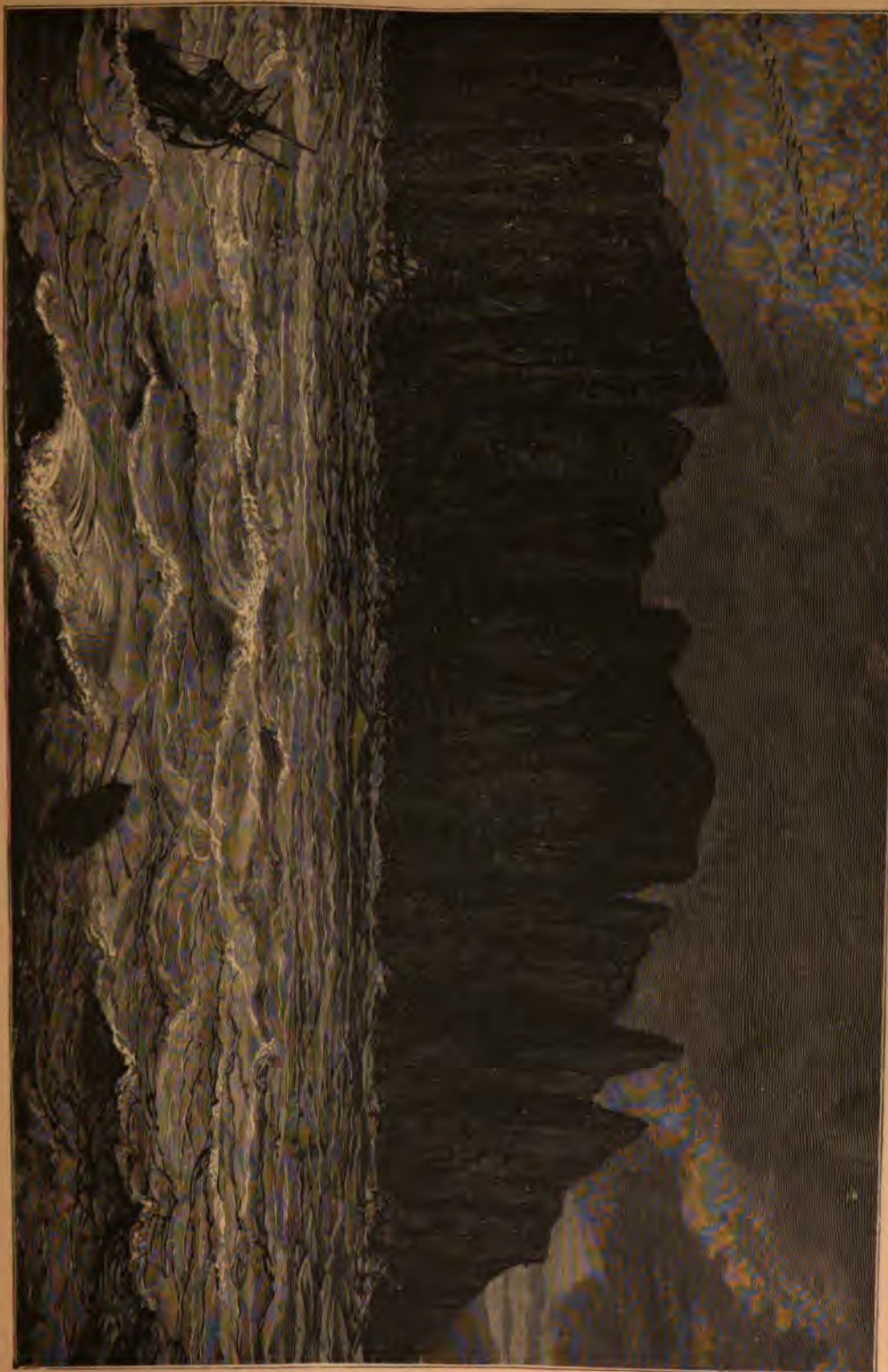
Islands. — Öland, Gottland, the "Skjaergaard." — Öland and Gottland belong to Sweden; the "skjaergaard" (fence of skerries) forms a part of Norway.

Öland (519 sq. m.) lies in the Baltic, opposite Kalmar, and very near the coast. The inhabitants depend for support as much on the sea as on the barren, limestone soil. The island is very narrow, but is 80 miles in length, and has a population of nearly 45,000.

Gottland (1203 sq. m.), farther out to sea, rises 50 miles from the shore and attains a height of about 200 feet. Its surface is limestone, like that of Öland. Its 52,000 inhabitants dwell on a naked tract, once covered by a mighty forest; the woods, which formerly overspread the entire island, lured hither the vapors, and more streams were despatched to the little lakes than these lakes receive to-day. The capital, Wisby, is a town of antique appearance.

The "skjaergaard" (8450 sq. m.) is the net-work of confused, mountainous, rain-swept, seamed, and imposing islands serving as a breakwater to western Nor-

NORTH CAPE.



way, and extending from the warm waters of the Skager-Rack to the North Cape; it is a labyrinth of islands, a maze of fiords, currents, counter-currents, and maelstroms (if we can apply this general term to the thundering conflicts of rock and wave). Peaks, the loftiest of which attains an altitude of 4300 feet, exceedingly narrow, blade-like ridges, and meadows, make up the surface of this girdle of skerries; on the smallest cove there are hamlets of fishermen and seamen; 250,000 men, an eighth of the Norwegians, occupy the "skjaergaard": 1160 islands are inhabited.

The Lofotens (2247 sq. m.; pop. 35,000) form the principal group of islands, islets, and reefs of the whole "skjaergaard." They possess its loftiest mountain, which rises from Hindöen (864 sq. m.); Hindöen is the largest island in this powerful though much broken dike. Notwithstanding the narrowness of the channels, but for which they would form a part of the mainland, it is less than a hundred years since the Lofotens entered the *concert européen*; even as late as the close of the wars of the Republic and the Empire, their inhabitants, it is said, still armed themselves with the bow and arrow, and yet many of the neighboring nations had been skilled for three or four centuries in the use of powder and ball.

Spitzbergen and Franz-Josef Land. — Steering toward the pole, from the Lappish fiords of Scandinavia and Russia, we reach a treeless, verdureless archipelago, destitute of streams, springs, inhabitants, and rulers. This archipelago is Spitzbergen, or the "Pointed Mountain." It derives this Dutch name from its sharp peaks, the highest of which does not apparently surpass 5000 feet. These peaks, of gneiss, granite, limestone, and volcanic rocks, rise dusky and black against the whiteness of the *névés*; huge glaciers, springing from these *névés*, descend to the coast and fall, block by block, into the sea, whose warmth undermines their jutting masses; with their heavy pavement they cover valleys that will never be explored; above 1300, 1600, or 2000 feet, according to the localities, the ground is not visible at any season of the year; it is in vain that the sun darts his rays, during days four months in length, on the seas of ice; he lights them up, warms them, and moistens them, he animates them with the noise of dripping waters, he even evokes cataracts from them, but he never wholly dissolves all this compact winter. How could he, between the 76th and 80th degrees of latitude, 600-900 miles from the pole, in a climate having an annual mean of 15° to 18° F., where there is ice sometimes in June and even in July, for the mercury in those months has been known to fall to 14°. And it has never been known to rise above 60°!

The Dutch were the first to anchor off the islands of this archipelago, which, it is estimated, contains 35,000 square miles. The surrounding sea at that time swarmed with whales, but their number has since been greatly diminished by the fishermen's harpoons; then multitudes of seals, of walruses with their cruel teeth, thronged these waters, but to-day they too have nearly disappeared; now, it is the Norwegians and the Russians rather than the Netherlands, the English and the Germans who come to chase the sea-cow in the neighborhood of Spitzbergen.

The white bear, the reindeer, the polar fox, the hare that no hunter ever terrifies, — these constitute the inhabitants of the Pointed Mountain.

It is supposed that no land emerges from the sea north of Spitzbergen in the direction of the pole; but some hundreds of miles to the north-east, Franz-Josef Land, recently discovered, lifts its basaltic rocks and its mountains, — one of which has an elevation of 5020 feet,¹ — above a glacial ocean, north of the 80th parallel.

¹ The Richthofen.

Aside from the reindeer, which is not found here, the islands and seas of Franz-Josef Land possess the animals of Spitzbergen, namely, the polar fox, the hare, the white bear, the seal; and, on the cliffs along the shores, as in Spitzbergen, the "skjaergaard," the Orkneys, and the Shetlands, millions of sea-birds lay their eggs and hatch and brood their young; the different species croak in dense flocks, each over its own rocky shelf; and the males, screaming with rapture or wrath, plunge with mighty wing-strokes into the billows to fish for the sustenance of the mother-birds.

DENMARK.

Denmark lies south of Sweden and Norway, and is, like them, a Scandinavian country. It contains 2,185,159 inhabitants, on an area of 14,124 square miles,¹ that is, 155 persons to the square mile. One third of Denmark is composed of somewhat fertile islands; the other two thirds is comprised in a less fruitful, slender peninsula.

Danish Islands. — Zealand, consisting of chalky rock, embraces about 2900 square miles. This island, the heart of Denmark, the capital of which it bears, is deeply indented on the north by Ise Fjord, and looks out on the Sound or Oeresund, an arm of the sea uniting the Cattegat to the Baltic. This passage, separating Denmark from Norway, is only $2\frac{1}{2}$ miles broad in the narrowest portion, before Elsinore, and its depth is slight; if the salt water should lower 65 feet, the Danish island would become Swedish territory. None of its elevations are above 330 feet; it has beautiful beech forests, graceful glens, greensward, castles, villas, and superb views of the sea, of the Danish archipelago, and of Sweden. Møen, Falster, and Laaland, now independent islands, were once a part of Zealand.

Møen (93 sq. m.), a summer resort, with precipitous cliffs, points with pride to its hills of 500 feet, which seem to the lowland Danes like Himalayas.

Falster (207 sq. m.) has a low surface.

Laaland, wholly destitute of relief, covers 460 square miles.

Far away to the east of these four islands, between the point of Sweden and the stiff, straight coast of Pomerania, Bornholm rises out of the Baltic. In other times it possessed much more than its present area of 225 square miles, but the waves have eroded it, and we can still see beneath the water near the shores a few remnants of its rock and forests. It is regularly shaped, in the form of a parallelogram, and consists of sandstones, schists, and granites, covered with woods and heaths.

On the west, on the other side of the Great Belt, Fünen (1320 sq. m.) in past ages constituted a part of the Danish peninsula which we call Jutland. The two lands are separated to-day by a strait encumbered with sand-banks; this passage, called the Little Belt, is only 700 yards wide in the narrowest portion. Fünen is a charming region, with delightful hill-slopes, meadows, and beech woods. The attendant islands of Langeland (110 sq. m.), Taasinge, and Aerøe, were once one and the same land with Fünen.

Jutland. — **Schleswig-Holstein.** — Jutland, the ancient Chersonesus Cimbrica, embracing in all 9752 square miles, forms the northern termination of the Germano-Danish peninsula. The southern half of the peninsula, Schleswig-Holstein, only

¹ These are the official figures from the last census, 1890. — Ed.

recently a dependency of Denmark, has belonged to Prussia since the annexation which brought to Germany, along with "German-speaking brothers," more than one hundred fifty thousand men¹ speaking nothing but Danish. In precipitately seizing² this "land interlaced with the sea," this "great bulwark of German customs," — to quote the words of a famous song, — Prussia obliterated, as it were, the peninsula which separated her Baltic shores from her North Sea coasts, for Schleswig-Holstein, low, and deeply indented on both sides, offers an easy way for ship-canals. Before Denmark was thus summarily diminished by the violence of man, her domains were insensibly narrowing by the action of the waves. In something over six hundred years (since 1240), the billows have wrested from her soil, including Schleswig-Holstein, more than 1150 square miles.

Jutland has fiords like Norway, — the Liim Fjord, for example, which covers 450 square miles, and stretches, with one expansion after another, from the North Sea to the Cattegat. But these inlets are fiords in nothing but name; the sea is wanting, as well as steep shores, mountains, snow-masses, glaciers, and cataracts. The fertile districts of Jutland lie in the east, above the Cattegat and the Belt, among the chalk hills, around Eiersbavnehøi (590 feet), and Himmelberg (564 feet), the two giants of Denmark. The mean altitude of this country scarcely surpasses 115 feet.

The Danes. — It was from the Jutland Peninsula and especially from the lowlands of southern Schleswig, that the Angles emanated, the people whose name has become that of England and the English, although the vast majority of Albion's children are certainly descended from other ancestors than those whom a handful of adventurers could furnish. As for the Saxons, who likewise contributed to the formation of the English nation, they were near neighbors of the Angles, and dwelt along the lower Elbe.

The Danes are Scandinavians, mixed in early times with Finns and Celts, — whom they encountered in the islands and in Jutland, — and penetrated later by Saxon, Friesic, and Dutch elements. They resemble the other Scandinavians in their calm energy, their integrity, their love of family, their taste for study, and a leaning toward mystical ideas. They are very patriotic, and they rely for the safety of their small and much menaced country on a close alliance with their Norwegian and Swedish brothers.

Their language is not as beautiful nor as sonorous as the Swedish; but it possesses a fine literature. It is also the political, literary, and social tongue of 2 million

¹ According to the Germans, 140,000 to 150,000; according to the Danes, 200,000.

² This seizure was made in 1864, after the death of Frederick VII., the last king of the house of Oldenburg. On the accession of Frederick VII., in 1848, the Schleswig-Holsteiners revolted, and the national assembly of Germany determined upon the incorporation of Schleswig. In pursuance of this project, Prussia sent armed forces into the duchies, but these were completely routed by the Danes. A treaty of peace was concluded with Prussia in 1850, by which the latter agreed that the duchies should be left to their own fate; the Schleswig-Holsteiners were soon subdued by the Danish troops. Foreseeing that the male line would probably become extinct in King Frederick, representatives of England, France, Austria, Russia, Prussia, and Sweden met at London in 1852, and signed a treaty relative to the succession. According to the protocol, in case of default of male issue in the direct line of Frederick VII., the crown was to pass to Prince Christian of Glücksburg. On the death of Frederick VII., Prince Christian was proclaimed king as Christian IX., but the Duke of Augustenburg laid claim to the throne, and his pretensions were supported by Prussia, Austria, and other German states. Denmark appealed to England and France for aid. Construing the reply received from these powers as encouragement, it declared war against Germany in 1864. The Danes found out all too late that England and France had no idea of aiding them. They made a brave fight to prevent the dismemberment of their kingdom, but were compelled, in order to save themselves from annihilation, to accept the terms of the Peace of Vienna, which reduced their domain to its present narrow limits. — Ed.

Norwegians, and the national speech of the 150,000 Danes of northern Schleswig, as well as of the 13,000 Färöe Islanders; lastly, it is the language of some 10,000 whites and Eskimo half-breeds on the shores of Greenland. There are, then, above 4 million men in the world who make use of Danish. Put with these the 5,000,000 Swedes of Sweden and Finland, and the 69,000 Icelanders, and we have 9½ million Scandinavians, without counting those of North America.

These Northmen, who were the first discoverers of America, are very numerous in the New World. The United States census of 1880 returned 194,000 Swedes, 182,000 Norwegians, and 64,000 Danes. These figures do not include the sons and grandsons of emigrants born on American soil. During the eight years which followed this enumeration, not less than 558,000 more arrived. So that we may estimate the present number of Scandinavians settled in the United States at fully a million; they have 700 churches, numerous primary schools, 5 seminaries, 6 Presbyterian synods, and 20 or 25 newspapers in their different tongues. But in the United States and Canada ancient and rustic Scandinavia will not be perpetuated. A few family names, changed and transmuted by English lips, will remain, and a few names of towns. *Verba et voces!* What other trace is left of the Northmen in Normandy? About one hundred fifty names of localities are evidently Danish in this land, which was conquered and held by these men of the North. And that is all!

The capital of Denmark, Copenhagen, has a population of 312,000; or 359,000, including Frederiksborg and other suburbs. The city is disproportioned to the rest of the country; for it contains more than one sixth of the Danes. It lies on the sound, nearly opposite the Swedish town of Malmö.

Iceland. — At nine hundred to thirteen hundred miles from Copenhagen, a fourth Scandinavian people inhabits an isolated island near the polar circle. This island, a dependency of Denmark, lies between Europe and America, on the bosom of a sea where the waves of the Atlantic and those of the Arctic meet. The French have important fisheries in these waters. They send thither yearly, chiefly from Dunkirk and Brittany, 250 ships, manned by 4500 fishermen.

Iceland is two or three times nearer to the frozen coasts of Greenland than to the foggy fiords of Scotland; but it is in reality a prolongation of Great Britain, and, consequently, of Europe, resting, as it does, on the same submarine pedestal of rocks.

Ships from Copenhagen to Iceland touch at the Färöes (515 sq. m.), a Danish archipelago, on which Slattaretind, the culminating point, has an elevation of 2755 feet. On these volcanic islands, which rise in superb basaltic cliffs, barley, the only cereal that can be grown, does not ripen oftener than one year out of three. However, the lakes do not freeze. The sea, which is very warm for the latitude, tempers the climate to such a degree that the winter mean is scarcely lower than at Constantinople, although the city of the Sublime Sultan is not as far north of the 40th parallel as the Färöes are of the 60th. What they lack is the glowing warmth of fogless valleys. Their 13,000 inhabitants speak the Danish language. Their capital is the gloomy Thorshavn, which has 313 rainy or cloudy days every year.

Iceland (39,693 sq. m.) bears a Scandinavian name, which signifies Land of Ice. This name is well merited; for glaciers, and, more extensively still, snow-masses, cover many of the plateaus and many of the valleys. One of the first navigators who explored it had, with equal wisdom, called it *Snaeland*, or the Country of

Snows; but the most suitable name would have been *Hraunland*, or the Country of Lavas, since a very great part of the primitive soil has disappeared under the matter ejected from the volcanoes. All that the snow-masses conceal of the plateau, 1000 to 2150 feet high, which constitutes Iceland, all that lies under the white mantle of the *jökklar*,¹ consists almost wholly of lava, basaltic rocks, pumice stone, and dry ashes; sterile because the water disappears in the incoherent mass.

Icelandic Volcanoes, Vast Lava Tracts; the Vatnajökull. — There are still active volcanoes in Iceland, the terror and scourge of the land. They fill up valleys with their frightful belchings, stop up lakes, and effectually hide rivers. Sometimes boil-



REYKJAVIK.

ing streams rush from their jaws, as in 1766, after an eruption of Hecla, and these torrents, swollen by the snows which they melt in their course, expand into inundations which would be fatal if there were any towns in the interior, but there are few inhabitants except on the coast, and these are principally in the west.

The most famous of the volcanoes, Hecla (5085 feet), has done less harm to Iceland than several of its neighbors; there are, however, in its history a score of crises, some of them terrible. The Skaptar is more to be dreaded; after the eruption of 1783, the poisonous sulphur fumes, the showers of ashes, the famine and pestilence which followed the disaster, carried off 9336 inhabitants from this land, which now has a population of only 69,000 souls, and never contained much over 100,000. The moun-

¹ Plural of *jökull*, snowy mountains, which spread out as plateaus.

tain, at that time, ejected 654 billion cubic yards of rock.¹ Krafla and Lechrunkur (Leirhnukur) kept the waters of Mývatn (Midge Lake) boiling for a long time around the burning lava with which they partially filled its basin. Katla or Köt-lugjá, the most southern vent of Iceland, is apparently extinct, and there is ice at the bottom of its crater; yet about fifteen eruptions of Katla are known to history. Lastly, under the snow of the Vatnajökull slumber subglacial volcanoes, which now and then awake; when they are in activity, their smoking lava and blazing ashes melt masses of ice, and prodigious torrents descend to the coast. The loftiest mountains of the island, the mean altitude of which is estimated at 1542 feet, are Öroefa (6417 feet), or Mount of Solitude, the Vatna (6299 feet), and Snaefell (5984 feet);² they face the Vatnajökull or Klofajökull, a *névé* of 3080 square miles, almost nine times the extent of the Norwegian Justedalsbrae, which is the largest snow-mass of all continental Europe. It is from the Vatnajökull that the chief Icelandic river flows, the Jökulsá, rough and rapid, and plunging at the Dettifoss over a basaltic wall 200 feet high.

Icy Torrents.—Hot Springs.—The torrents springing from the *jöklar* roll their whitish floods of snow-water over lava channels whose banks are joined by no bridge; the fording of these torrents is not without danger, for they are broad and turbulent, often sloping in rapids, and often broken in cataracts. Their waves are extremely cold, although many almost boiling streams are poured into them, for Iceland is *par excellence* the land of the *laugar* and *hverar*, or hot springs, of *reykjar*, or jets of steam, and of geysers, or intermittent spouts of water suddenly hissing into the air to the height of 50, 75, or 100 feet, and then falling back on the fiery fountain which ejected them.

The hot or tepid streams, however numerous, all lose their heat in the frigid waters, and the torrents of Iceland (where they are not too much streaked with volcanic ashes) abound in trout and salmon,—those lovers of cool currents; more than one of the *vatn* or lakes of their basins owes its existence to the volcanoes, to their rivers of fire which have become stone dikes across the valleys; many another is gradually disappearing, filled up by the lava from some crater: the Mývatn, for example, which lies in a shallow cup, on the bosom of a gloomy waste, encircled by shores where columns of vapor rise from hot springs, and in an atmosphere infested by mosquitoes.

Decadence of Iceland.—In the historic era, and also in our own day, not only have these volcanoes made and unmade lakes, they have likewise spread themselves out over grazing slopes and arable valleys. In the early centuries of their existence the

¹ According to Lyell, the largest amount of lava ever ejected from a volcano, in the historic period, was discharged at this eruption. Two principal lava-streams flowed from the crater: one of them was 50 miles long, from 12 to 15 miles broad, and 100 feet deep; the other was 40 miles long.

One feature of the eruptions in Iceland has been the immense amount of fine dust ejected. The earliest historical eruption, that of 1104, is noted as the "sand-rain winter"; the second, in 1158, as the "great darkness," from the quantity of ashes ejected. In the eruption of Hecla referred to above (1766), a column of ashes rose into the air to the height of 16,000 feet. Fine dust from the Skaptar eruption of 1783 fell in such quantities between the Orkney and Shetland archipelagoes that vessels passing there required to have the deposit shovelled off the decks every morning. The crops also failed that season along the north coast of Caithness (600 miles distant) on account of the quantity of volcanic matter that fell on the soil; the inhabitants there speak to this day of the year of the "ashie." — ED.

² Authorities differ considerably as to the altitudes of the principal Icelandic summits. The height of Öroefa is variously given from 6241 feet to 6466, that of Snaefell from 4713 to 6808, and that of Hecla from 4532 to 5085. — ED.

Icelanders were richer and more numerous than they are now; just what they have lost in soil and men we do not know, but it is certain that the island is less habitable and less populous than before the conquests of the lava and ashes over tillage and pasturage. At present, beyond the few spots on the sea-shore and in glens and valleys where verdure is not wholly wanting, aside from birches 16 to 20 feet tall, or even 25 to 30, — remnants of forests that were once more extensive, — aside also from here and there a willow, an ash, or a stunted sorb-tree, we encounter little in Iceland except low mosses, peat-bogs, ashes, plains, and hillocks of black sand, *myrar* or swamps, desolate lakes, volcanic ejections, and, in this dusky world lighted by the volcano's lurid flames, the whiteness of limitless snows.

The Icelanders have for fuel only scattered shrubs, dried peat, the bones and feathers of sea-birds, and the small amount of drift-wood brought to them by the ocean; menaced with death from starvation, they would perish from cold if they had not their peat-bogs, and if Scandinavia did not send them fir-trees. An exceedingly variable climate, prodigal, even at the end of spring, with its moist and cold winds, snows and showers, hangs over the land of the *jökklar*, making it dull and sombre rather than icy; even here, near the North Pole,¹ the sea maintains its rights. Who would think that the annual mean of Reykjavik was 39° F., or that of Akureyri 32°?

The Icelanders. — About the year 1250, Iceland, so history tells us, contained more than 100,000 inhabitants, a number reduced to 38,000 in 1786; the returns of 1888 gave the population as 69,200, or nearly 1.7 persons to the square mile. And these 69,200 Icelanders are almost a burden to the mother-country; finding it impossible to be generous to her children, she is beginning to scatter them over North America, — in Nova Scotia; in Canada; in Manitoba, on the shores of Lake Winnipeg; in foggy and frigid Alaska; and in the United States, whose boiling springs and huge water-jets are obliterating the ancient renown of the *laugar*, *hverar*, and geysers of Iceland.

The Scandinavians who arrived in Iceland in the ninth and tenth centuries — after 874 — found there only a few Celtic monks, who had come from Scotland about eighty years before. The Icelanders are descendants of those sea-roving Norwegian pagans who fled to the island to escape the despotism of Harold Fairhair,² or the religion of Christ, which had recently appeared in Scandinavia. This is the least mixed of the Scandinavian nations, all of which are comparatively pure. The Icelanders have precious guard the old tongue, which is universally pronounced to be very beautiful, and which possesses in its sagas a marvellous fountain of youthful poetry. If these songs of the heroic age had come down to us under the name of a man, that man would be the Homer of the north.

The Icelanders profess the Lutheran faith.

The capital, Reykjavik (pop. 3000), on a fiord of the western coast, derives

¹ The most northerly points of Iceland touch the Arctic Circle.

² It was under this Harold Fairhair that Norway became a united kingdom, about the end of the ninth century. According to the commonly received story, in 860, Harold succeeded his father as king of a small district called Vestfold, lying west of what is now Christiania Fjord. He first gained a firm grasp of his father's domains, and then set out to subdue the rest of the country. The last battle was fiercely fought near Stavangar, in the very centre of the region from which the Norwegian vikings made most of their expeditions. Harold gained a complete victory, and henceforth he held undisputed rule over Norway. He made his tyranny felt by every chief and every man in the kingdom. Many of the leading men sailed from Norway with their families and followers, and settled, some in Iceland, but many more in the Scottish islands. — ED.

its name (Smoking Town) from the vapors which float over the warm springs in the vicinity.

Jan-Mayen. — Far away to the north-east of Iceland, on the threshold of that eternal ice which seems to shut us off forever from the pole, lies Jan-Mayen, uninhabited, unowned; Boerenberg, or Bear Mountain, rises there to the height of 5824 feet.

RUSSIA.

Magnitude of Russia. — **Vast Size of the Empire.** — Russia, separated from Asia by the Ural Mountains, by undefined steppes, by the Caspian Sea, and the lofty barrier of the Caucasus, covers more than one-half of Europe; for, out of 3,900,000 square miles, her share is 2,115,000. With the Asiatic dependencies of Siberia, the Steppes, Turkestan, the Transcaspian region, and Transcaucasia, the Russian Empire embraces nearly 9 million square miles,¹ or about three times the area of the United States; it contains 113 million inhabitants. The Russian Empire, such as we see it to-day, occupies a quarter of the old continent, and comprises a sixth of the land-surface of the globe. It is daily enlarging, and the flood of population is steadily swelling.

The greatest lakes of Europe, Ladoga and Onega, lie within its borders, and also the longest rivers. What is chiefly lacking is elevation; the mean altitude, 548 feet, is much inferior to the average height of all Europe (974 feet). Russia rears no genuine mountains except on her frontiers; on the south, in the Caucasus, between Europe and Asia, Mount Elbruz rises 18,526 feet; and on the east, likewise between Asia and Europe, the Urals attain an elevation of 5541 feet.

The Urals. — **Nova Zembla.** — The occidentals, or, to be more accurate, all Europeans except the Russians themselves, bound European Russia by the summits of the Urals, a granitic chain covering 127,500 square miles; but the sons of this most vast of empires do not choose to make the Ural belt a dividing line between the occident and the orient of their fatherland; for them, east as well as west of these mountains it is Russia, one and inseparable. Moreover, in crossing from one slope to the other of the Urals over this ridge more than 1850 miles long, which is sometimes a single range, sometimes composed of two or three parallel chains, nothing in the soil, nothing in the climate, nothing in the men, neither their features nor speech, shows that we have passed from one division of the earth to another. But for the sign-posts on the transverse roads, and the succession of clearings through the forests which indicate the frontier, we should step from Europe into Asia without knowing it; only, on the Asiatic side, where perhaps we might expect to find barbarism, the country is richer, the towns are busier, more luxurious, more grandly built, and they are growing more rapidly.

A railroad traverses the Urals from Perm to Yekaterinburg; very easily, for the chain is here nothing more than a smooth convexity with a col at an altitude of 1181

¹ According to Strelbitsky's *Superficie de l'Europe* (1882), the area of European Russia is 2,095,504 square miles, and that of Asiatic Russia about 6,548,600, making a total of about 8,644,100 square miles for the Russian Empire. — Ed.

feet. Not far from this iron way is a route over which, climbing from one wooded height to another, millions of soldiers, convicts, peasants, settlers, and tourists have passed from Europe into Asia, and from Asia into Europe; it is the road from Moscow to Tobolsk, bordered between Nijnii-Novgorod and Tjumen by a birch-tree walk, the longest in the world; the great Empress Catherine had this avenue planted, and assured its preservation by a Draconian law condemning to death any man who should dare to cut down one of these beautiful white trees. The line, in many places double, was to have extended to far-away Irkutsk.

The metal-seamed southern Urals are rich in gold, iron, copper, platinum, diamonds, malachite, and salt; they abound in forests, which, unfortunately, are being cut down with mad wastefulness, for fire-wood as well as for building boats, and to satisfy the greedy appetite of factory furnaces; the culminating point of this part of the chain is Mount Iremel (5039 feet); the loftiest summit of the central chain is Denejkin-Kamen (5358 feet); in the north, Tell-Pos-Is or Nepubi-Nior (5541 feet) surpasses all the other Ural peaks. The northern Urals, barren and snow-laden in the valleys and glens, are prolonged beneath the sea by the island of Vaigatch, and then by Nova Zembla,¹ two large islands, embracing 35,000 square miles: around this double archipolar land (if we may risk the word) stretch fields of fixed ice; in the interior are mountains from 3000 to 5000 feet in altitude, snow-masses, glaciers, lichens, and, overtopping these lichens, forests of dwarfed and more than dwarfed trees, firs, willows, elders, and birches, the proudest of which look down on the lichens from a height of four or five inches.

The Russian Plain, Steppes. — Black-Earth Zone. — As a whole, Russia is very flat; outside of the Caucasus, the Urals, Finland, and the Crimea, there is not an elevation of 1300 feet. This evenness of surface is a great bond of the empire; it smooths the path of the rivers, and facilitates the construction of canals, highways, and railroads. Russia, moreover, belongs to that greatest of road-builders, winter. During a quarter, a third, or a half of the year, according to the latitude, this mighty leveller burnishes the entire surface of the country, from the White Sea to the Black, and the sledges glide over the hardened snow as though on rails. The *mujik* travels then in all directions over the vast, white plain, in the midst of forests which are white also when they are of birches, but black, except for their frosty boughs, when they are of pines and firs. He traverses rivers and streams without seeing them, for they are all hidden beneath the snow-weighted ice. On this boundless whiteness, in these woods and plains, the absence of farm-houses and hamlets augments even to bitterness the melancholy engendered by the solitude. In Russia, at least among the Great Russians, the land is not owned by individuals but is held by the commune, and is parcelled out to the different families, — so many *dessyatines*² for each living member, — at periods varying according to the district. Nothing binds the peasant of Great Russia to the land which he holds by chance or by the cheatery of a division, for five, ten, twenty, or even thirty years do not make up the whole future of a man and a family; the *mujik*, therefore, has no longing to rear his home on soil that will flee from under his feet; he prefers to live in the village, in his *izba* (or cabin), and on his garden, of which he is the master. So the inhabitants of Great Russia dwell, with very few exceptions, in little hamlets which all resemble one another, on long and very broad streets bordered with wooden izbas; these izbas are not built near

¹ The Russian name, *Novaja-Zemlia*, signifies New Land.

² The *dessyatine* is about 2.7 acres.



THE MOSKVA AT MOSCOW.

together, for fear of fire, which, once started in one of them, would, if they were closely set, very speedily devour the entire village.

Level as Russia is, the scenery would be ugly were it not for its wide streams, its lakes, and its forests of Scotch pines, pitch-trees, firs, larches, magnificent birches, oaks, beeches, and lime-trees. The wood-cutter, the settler, the clearer are all ravaging these woods, and at the same time fire is doing its deadly work; and yet forests still cover 830,000 square miles. They are the refuge of bears, and the hiding-place of lynxes and wolves; these wolves slaughter every year hundreds of millions of cattle, horses, sheep, dogs, and geese, and sometimes they kill the inhabitants themselves.

In the north are countless lakes, great and small, and the *tundras* or semi-Arctic, treeless plains; south of these plains stretch cold forests through which course cold rivers; the Petchora, which is an almost unknown stream to us, drinks the waters of 127,500 square miles, and is 1025 miles long; it flows from the Urals. The Dwina (*Dvina Severnaia*) has a length of 1072 miles, in a basin of 141,000 square miles; it bathes Archangel, and empties into the White Sea. The centre of Russia is occupied by forests, — which are here cut into, and there ruined, — by sluggish rivers, and by meadows; cultivated fields are encroaching on the timber-lands. The south embraces the Steppe and the *Tchernoziom* (Black-Earth region).

The Steppe lies chiefly along the lower Volga and the lower Don. It is a boundless plain, grassy or barren, beaten by winds, and equally familiar with tempests of snow and hurricanes of dust. With few or no undulations, it has nowhere, as far as the most distant horizon, other elevations than the low hillocks called *kurgans* or the tombs of the Huns, and which are, in fact, burial mounds. These eminences are seldom 50 feet high; in other lands they would bear feudal ruins, but here rarely does an old castle crown them, and it is not on stones that have drunk blood that the shepherd watches from their summits his flocks scattered over the moor. In the depressions flow, or crawl, or hide, according to the season, rivers which are frozen in winter and are scant and lazy in summer. On their banks, and in the swamps formed by their inundations, immense fields of reeds shiver under the breath of the lightest breeze. The grass of the Steppe is interspersed with wormwood, mugwort, thistles, mulleins, and milfoil. Though hostile to cultivation, in a measure, it is favorable to grazing, and the cattle, sheep, and famous horses, which, together with cereals and timber, constitute Russia's substance, are raised here in great numbers. Like all plains of an imposing monotony, the Steppe has a beauty of its own. Its inhabitants adore it. In olden times, when a warrior of Little Russia fell on foreign soil, in the Carpathians, in Bohemia, Germany, Lithuania, or in Great Russia, before dying he piously kissed the handful of mother earth which he carried with him on all the battlefields.

The Tchernoziom, whose stream is the Dnieper, justifies its Russian name of Black Mould. It is said to be unrivalled in Europe in productiveness; the soil is formed from the decomposition of the grass of the Steppe. This "granary of all the Russias" comprises six governments, in whole or in part, namely, Poltava, Kharkov, Tchernigov, Volhynia, Podolia, and Kiev. Next to the Tchernoziom, the region which gives greatest promise of an opulent future lies about "Holy" Moscow.

The Volga, the Oka, and the Kama. — The Caspian Sea. — The Volga¹ ranks first

¹ In the article *Russia* only recently published in the *Encyclopædia Britannica*, Prince Kropotkin gives the following statistics in regard to the longest three rivers of Russia: "The Volga, the Dnieper, and the Don attain respectively a length of 2110, 1330, and 1125 miles, and their basins cover 645,000, 244,600, and about 115,000 square miles respectively." As for the other rivers of the country, Prince Kropotkin's figures vary considerably from those given by Reclus. — Ed.

among the rivers of Europe in length (2350 miles), and in extent of basin (563,000 sq. m.); its mean flow (204,000 cu. ft. per second) is surpassed by that of the Danube alone.

The Russians love this river, and bestow endearing names upon it, such as *Mutiushka*, or "little mother," and *Kormiliza*, or "nurse." It flows from a swampy plateau studded with lakes, which reflect the highest elevations of this part of Russia, namely, the Volkon forest and the Valdai Hills (1151 feet). Its fountain, at an altitude of less than 985 feet, becomes a boggy brook, which, slipping from lake to lake, is soon transformed into a river. On the natal table-land its descent is so gentle that the dam built below Lake Volgo sets the water back for 50 miles up-stream. It reaches the Russian plain by thirty-three small rapids; there, wood-skirted and tortuous, it flows by Tver, which once rivalled Moscow; by Rybinsk, at the head of navigation, a town which witnesses the arrival and departure of some thousands of



A RUSSIAN IZBA.

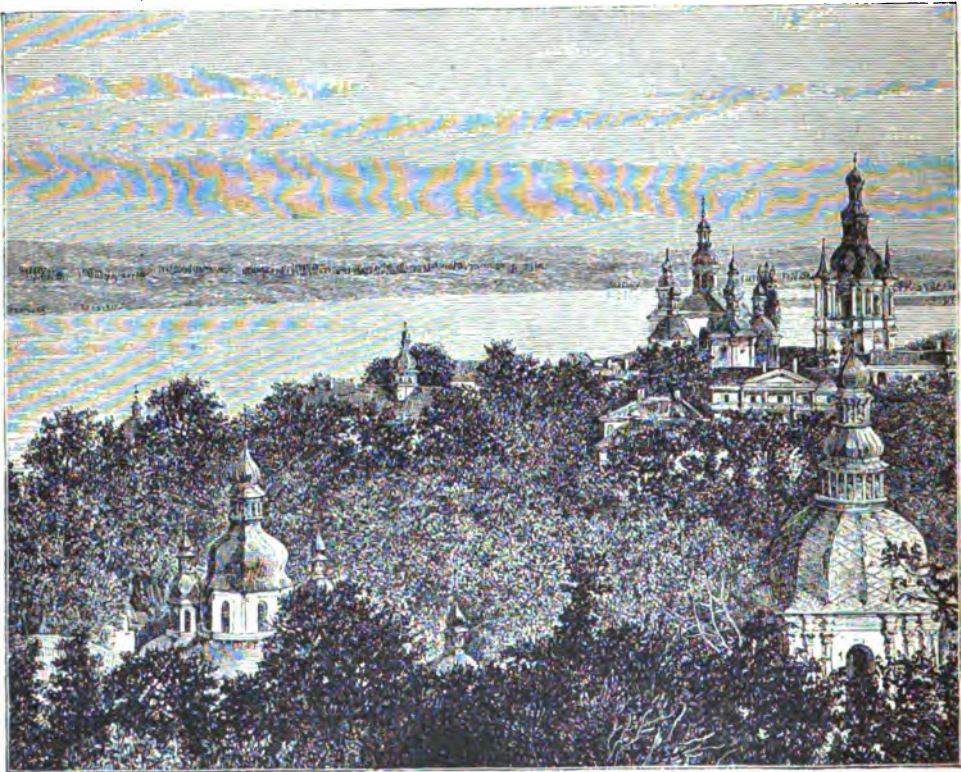
boats during the summer; and by Yaroslav, which also disputed the hegemony with Moscow among the Eastern Slavs,—the Yaroslav valley is called the "garden of Russia." Below Yaroslav the Volga passes Kostroma, which is surrounded by forests where bears abound.

The grayish flood of water encounters the central river of Muscovy, the winding and limpid Oka, 4250 feet broad and almost as powerful as itself, before the bazars of Nijnii-Novgorod. Nijnii, a city of 67,000 souls, shelters 250,000 to 300,000 people at the time of its fair, which attracts thither the merchants of Europe and Asia. The Oka (900 miles long, in a basin of more than 90,000 square miles) has three government seats on its banks: Orel, Kaluga, and Riazan; it receives the Moskva, on which Moscow is situated, and the Kliazma, which touches Vladimir. This last town was once the capital of that Slavic country which became first Muscovy, and then Great Russia, and, finally, the mighty Russian Empire; Vladimir preceded Moscow, it followed Suzdal.

Below Nijnii-Novgorod the shores of the Volga cease to be exclusively Russian. Below Kazan, which was originally wholly Tatar, and which is so still to some ex

tent, the Volga comes in contact with the Kama. The Kama is a transparent river, carrying as much water as, if not more than, the Volga itself, at their confluence. It is nearly 1000 miles long, in a basin of 203,000 square miles; it has powerful affluents, notably the Bielaña or White River, and the Viatka. When the Kama joins the Volga, it imposes its direction on the stream, and the two currents, the one clear, the other turbid, flow for a long time side by side, and mingle but slowly. The Kama, which is deeper than its rival, and less obstructed by sand-banks, is an important Russian route to Asia. Thirty thousand or more "fresh-water mariners" guide multitudes of boats over its bosom.

From the mouth of the Kama to the sea the Volga does not increase in volume, although it receives a few tributaries; the hot skies and parched soil deprive it of per-

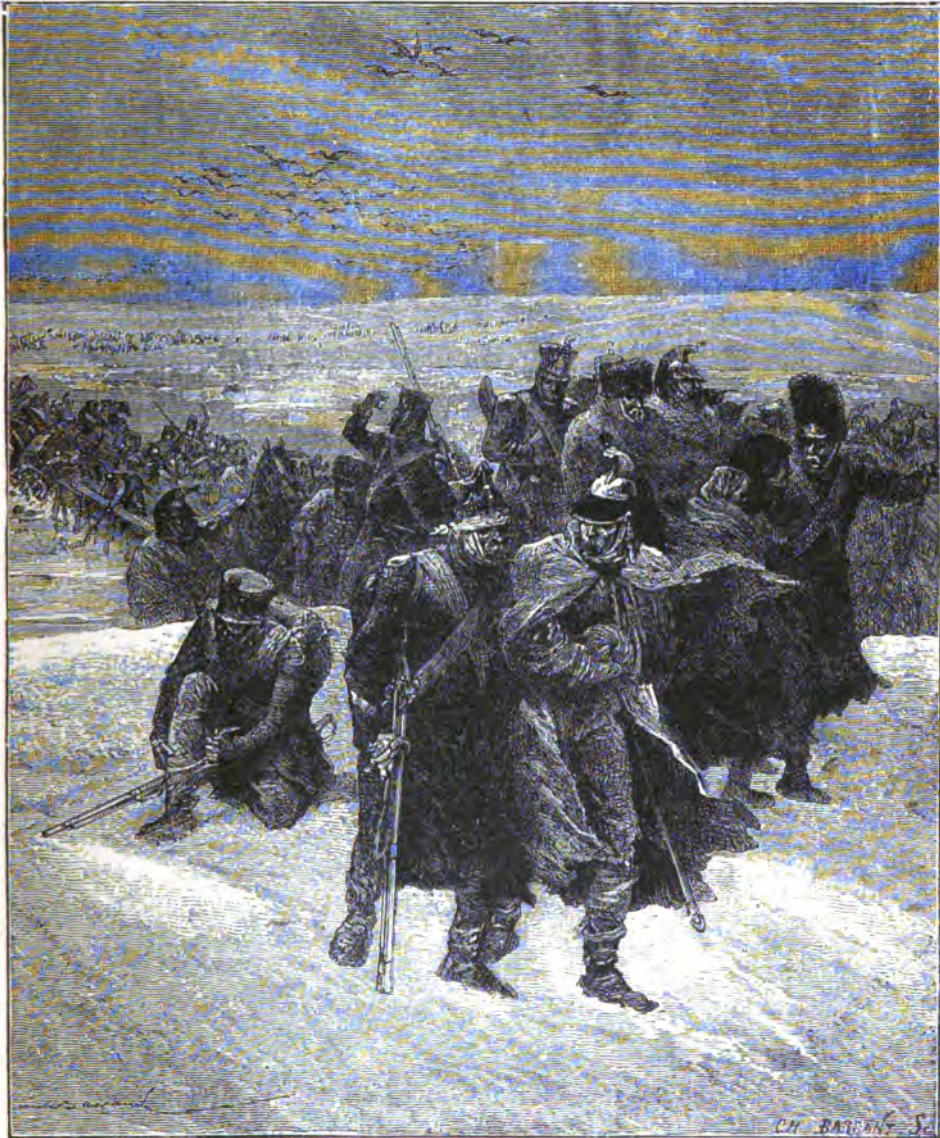


THE DNEIPEP AT KIEV.

haps even more water than the last affluents pour into it. The left bank is sandy and barren, with a very dry climate, which is subject to great extremes of heat and cold. So this corner of the empire is not populous; fewer Russians, comparatively, and more allophones, are found here than in any other quarter of Russia. Though the left bank of the Volga is low, the right rises in magnificent hills, one of which overlooks the water at the height of 1102 feet. Below the mouth of the Kama, the Volga bathes Simbirsk, Samara, Syzran, and Saratov. At Tsaritzin, it is only 47 miles distant from another long stream, the Don; it would seem as though the latter, 138 feet higher than the Volga, and running straight toward it, had nothing to do but to fall

into it; but suddenly the Don turns to the south-west, the Volga to the south-east. Though still far from the sea that is destined to devour it, the Volga already flows in a plain that is lower than the ocean; the Caspian slumbers 85 feet below sea-level.

The first outlines of the delta appear at Tsaritzin, fully 300 miles from the Cas-



THE PASSAGE OF THE BEREZINA.

pian. Astrakhan (pop. 74,000), in a climate varying from excessive heat to excessive cold, is the principal city of this net-work of channels, of living and stagnant waters, jungles of reeds and rushes, countless islands, and incoherent mud; flotillas of ducks sail on the miry waters; the cormorant, the goitrous pelican, and the long-legged

heron lie in wait for the fish; and men, too, fish from their skiffs. These men dwell in wretched wood or reed huts, which are mounted on piles to escape the great annual floods that come with the melting of the snows. These overflows, which efface the delta and then build it again, are so powerful that the Caspian, a sea of 170,000 square miles, was raised 2 feet by one of them. Owing to this perpetual remoulding of the deltaic deposits (6450 sq. m.), we cannot say with certainty by how many mouths the stream enters the sea. From 40 to 50 million Russians live in its basin.

The Caspian is the tomb of many other rivers; the Kuma, which is no longer powerful enough to carry alluvia into the sea; the Terek, flowing from the ice of the Caucasus, a powerful stream in spite of the draughts made upon it for the irrigation of the lowlands; the Sulak, rising in the snows of Daghestan; the Kur, swollen by the Araxes; the rivers of Ghilan and Mazanderan; the Atrek; the melancholy channels, nearly always dry, of the new territory of Zakaspiskii;¹ lastly, the Ural, 1250 miles long, in a basin of 100,000 square miles, and yet discharging into the Caspian an average of only 1750 cubic feet per second. Of the nineteen constant mouths which the Ural possessed in the middle of the last century, but three now flow the year round, and these are very shallow; the fountains of heaven are almost dried up in this desolate region of the salt steppes, and it rains less and less each year on the lower Volga, on the Transcaspian region, and on the Aral Sea and its two large streams.

The northern third of the Caspian (this most vast of all lakes, whether salt or fresh) is not more than 15, 30, 50, or 52 feet deep; in the south, at the base of the mountains, the lead sometimes sinks 3000 feet. Since its surface is 85 feet below the ocean, if the Caspian should rise to sea-level, it would engulf the Volga as far as Saratov, 500 miles from its present mouth, and the saline flood, doubling in area, would cover a portion of the most wretched steppes of Europe and Asia. Formerly, all this flat country lay beneath its waves, and it was even connected with the Black Sea through the low regions to the north of the Caucasus. Proofs of this fact are distinctly written on the soil; to-day still the melting of the snows re-establishes for a few days the union of these two seas, when the little Kalaus, swollen by the flood, pours its waters at the same time into the East Manytch, a temporary affluent of the Caspian, and into the West Manytch, a more or less permanent affluent of the Don.

How were these two seas divorced? How was the Caspian afterward lessened by half and deprived of one of its chief tributaries, the Oxus or Amu, which at present flows into the Aral? Perhaps by a sundering of rocks, sudden or otherwise, which opened the Bosphorus and sent a vast body of water into the Mediterranean; or perhaps by causes acting with cosmic patience, such as upheavings of the surface and the slow diminution of the rains.

The Neva, Onega and Ladoga.—The principal stream of northern Russia, the Neva, is the Saint Lawrence of Europe, but shorter, of less volume, traversing fewer and smaller lakes than the American river, and having no Niagara between its Onega and Ladoga as the American Saint Lawrence has between its Erie and Ontario. Into the "glorious" Onega, with its marble shores, empty many currents that have made their way through lakes. Onega, with an area of 3765 square miles, and a maximum depth of 738 feet, lies 236 feet above the sea, and 177 above Ladoga. The limpid Svir bears its tribute to tempestuous Ladoga, which also drinks the turbid Volkhov and the transparent Vuoxen, — the latter a Finnish stream, the former Rus-

¹ This Russian compound means Transcaspian.



A BAND OF COSSACKS.

sian. The Volkhov issues from Lake Ilmen, a shallow expanse (30 feet deep at the most), of 355 square miles. The Vuoxen, which flows through Saima Lake, contains the grand cataract of Imatra. The cold, clear waters of Ladoga cover 7000 square miles, with an average depth of 300 feet, and a maximum of 731. They discharge the marvellously transparent Neva, which has a breadth varying from 850 to 4200 feet. Its mean flow, of 104,000 cubic feet per second, is surpassed by that of only three rivers in Europe, the Danube, the Volga, and the Dnieper. It drains nearly 112,000 square miles, and is 36 miles long. It empties into the Gulf of Finland, after having mirrored the palaces of Saint Petersburg. The Narova, which may be considered as a river of the Neva basin, rises in an extensive sheet of water, Lake Peipus (1356 sq. m.); it precipitates itself in the cataract of Krähnholm, or the Falls of Narva.

The Don, the Dnieper. — The Cossacks. — The Don, a river of the Steppes, bears the penalty of the almost rainless climate of the lower portion of its basin of 166,000 square miles. This stream, the ancient *Tanais*, is 1330 miles long, and carries a mean of not more than 8800 cubic feet per second; though its low-water flow is unworthy of such a course in such a basin, its floods are imposing. The Don rises in the centre of Russia, near the manufacturing town of Tula (pop. 64,000). It issues from the little Ivan lake, whence its appellation of Ivanovitch, Son of Ivan, in the heroic songs of the Cossacks. It empties into the Sea of Azov, a sheet of 14,480 square miles, having a depth of only 33 feet. This small and shallow sea, the ancient Palus Maeotis, opening into the Euxine by the Strait of Kertch, is less a sea than a broad expansion of the Don; and the real embouchure of the river is the Kertch, or Yenikale Channel. Among the affluents of the Don, the Donetz shares the poverty of the principal stream; for, with a length of nearly 700 miles, it is only 66 feet broad. It traverses one of the great coal-basins of Russia (10,000 sq. m.), called the basin of the Donetz.

The Dnieper, in olden times the *Borysthenes*, is the stream of the Tchernoziom, the stream of White Russia and Little Russia, the stream of the Cossack epics. Its drainage area is about 200,000 square miles, and its length about 1150 miles. With a mean flow of more than 100,000 cubic feet per second, it ranks third among European rivers. It has its source among the White Russians, on the plateau whence the Volga and the Duna descend. At Smolensk, whose name, like that of Moscow, recalls the shedding of much French and Russian blood, at Moghilev even, it is still a mediocre river. But it receives, one after the other, the Berezina, the Soj, the Pripet, and the Desna. The Berezina, of sinister fame, engulfed in 1812 fragments of the Grand Army; the Pripet, emissary of more than 4600 square miles, is the drainage channel of the greatest swamps of Europe, the Marshes of Pinsk, where the *pluca Polonica* prevails; the Desna joins the stream before the gates of Kiev. With a breadth of 1600 to over 2600 feet, the Dnieper flows past Kiev in all its glory; then it encounters granite rocks, which obstruct its course toward the Black Sea. Above Kremenchug, below Yekaterinoslav, the stream traverses these granites by powerful rapids, or *porogi*, and small rapids, or *zalori*. The most turbulent nine lower the level of the Dnieper 154 feet, in a distance of 47 miles. In the spring these rapids disappear, so enormous are the floods; and then they are navigable. Below, when the stream becomes calm once more, it loiters among wooded isles, and at last enters its estuary, beyond the city of Kherson (pop. 62,000), and thence pours into the Black Sea.

In comparison with the Dnieper, whose basin supports 15 to 20 or 25 million men, the Dniester is unimportant. Issuing from the country of the Ruthenians, or Little Russians, and from among the Austrian Roumanians, this very tortuous river is 930 miles in length; it drains 29,670 square miles. Narrow and deep, it winds between steep banks, tracing more or less sharply the boundary line between the Roumanians and Slavs.

The basins of the Don and the Dnieper have given to the world the valiant race of the Cossacks. The Cossack nation (in Russian, *Kazak*) was at first a camp consisting of the bravest men of southern Russia, of all those who, lance in hand, dared to defend their Greek faith, their families, and their herds against the Tatar Mussulmans of the Crimea. The camp was double. On the Borysthenes, below the porogi, the Cossacks of the Dnieper, the Zaporogians, or Dwellers beyond the Cataracts, had their fortress on an island in the river. They fought on foot more than on horse. Trained to the use of the oar by the angry porogi, taught to manage the sail on the same waters after they had grown tranquil down-stream, these Cossacks had become peerless canoeists, and, descending the river in their skiffs, they went out to battle as far as Constantinople and Trebizond; they spoke Little Russian. In the vast expanse of the Steppe, the other Cossacks, those of the Don, had become horsemen, almost Centaurs; they spoke Great Russian.

On both streams the Greek religion prevailed equally; but on neither were the tribes of purely Slavic blood. The Cossacks had opened their ranks to every intrepid man, no matter whence he came, no matter who he was, to *routier* as well as to settler, provided the new member professed or embraced the Greek faith; and in that way Lithuanians, Poles, Roumanians, Bulgarians, Turks, and Tatars, and even Mongols, entered into the woof of this bold nation. Little by little their camps grew, under the leadership of a *hetman*, chosen each year by popular election. By dint of fighting, the Cossacks finally drove out the Tatars; then they warred against all the peoples of their orient. From so many sanguinary battles, from so much blood, sometimes generously given, sometimes cruelly spilled, there have come down to us some superb popular songs, known as the *dumi*.

The Cossacks oscillated for a long time between Poland and Russia. The latter won the day, and they have ever since been Russia's advance guard in the world. At the end of the seventeenth century, they were her pioneers on the Amur. To-day, the first tenants of every country seized by the beak and claw of the Muscovite eagle are the Cossacks of the *stanitzas* (villages of soldier-husbandmen). There are 2,200,000 Cossacks, including all, warlike and peaceable. They are descended for the most part from the Cossacks of the Don, and, therefore, speak generally the great national tongue.

Climate.—The very name of Berezina pictures to us, with a little exaggeration, the extremes of the Russian climate, exceedingly hot in summer, even in the high north, under the skies of Archangel, exceedingly cold in winter, even in the far south, where the sea of Azov sometimes freezes. If the French army perished in the snows after the burning of Moscow (1812), the French and the English barely escaped dying with cold before the walls of Sevastopol (1854–1855). In measure as we advance from the south toward the Arctic Ocean, or from the west toward Siberia, the climate becomes more rigorous; the annual mean of Archangel, latitude 64° 34', is 32.7° F.; that of Saint Petersburg, latitude 59° 57', is 38.4°; the temperature ranges there between —20° and 83° F.; at Kazan, latitude 55° 47', we find a yearly average of

only 37.2°, while the Danish towns under the same parallel have a mean of 42.8°, and the Scotch cities a still higher temperature; in this same Kazan, an essentially "continental" town, January gives a mean of 7°, while that of "maritime" Edinburgh for the same month does not fall to 32°. Odessa, in the extreme south, on the sea-shore, latitude 46° 29', presents an annual average of 49°, but the cold of January is nearly 24.8°. The temperature of the Russian towns is 7 to 9 degrees lower than that of the western cities in the same latitudes and at equal altitudes.

As for the rains, they are not copious, for the prevailing winds are from the east, north-east, and south-east; the empire is too massive, too compact, too little penetrated by large gulfs; the Euxine scarcely merits the title of sea; the Caspian is a diminished if not diminishing lake; the Baltic is a *cul-de-sac*; the Arctic Ocean is a frozen expanse, sometimes melting, but only to freeze again. The farther one goes toward the east, and especially toward the south-east of Russia, the less abundant are the rains. The annual fall at Warsaw is 22.8 inches; at Saint Petersburg, 18.3; at Moscow, 23; at Astrakhan, 5.7 only, scarcely as much as in parched Alexandria. But for this dryness of climate, the Russian rivers would pour a vastly greater amount of water into the seas, and the Volga would be nearly twice the size of the Danube.

Great Russians, Little Russians, White Russians. — Divers Races. — The Russian Empire contains to-day more than 113 million inhabitants, of whom 96 million belong to Russia, 7 million to Caucasus, 4 million to Siberia, and 6 million to Central Asia and the Transcaspian region. Of these 113 million men, 75 to 85 million are Slavs; and of these Slavs 70 to 80 million are Russians — Great Russians, Little Russians, and White Russians, all differing in speech.¹

"How much non-Aryan blood has entered into your nation!" some one once said to a Russian. "So much the better! The more mixed we are, the more brothers we have," was the response. The Russian family has close ties of kinship with the Finns and with the Turks and Tatars. It was founded among the first; the others were for a long time its neighbors and enemies, and later its subjects. Who knows what elements it absorbed from the Finnic Merya, Muroms, Mescheriaks, Mordvinians, Tchuvashes, Tcheremisses, and Karelians; from the Tatars of the Volga and the Suras; and even from the Mongols, who were less Mongols than an immense camp of bandits representing all the races of central Asia? Moscow was founded among the Murom Finns, Nijni-Novgorod among the Mordvinians, Saint Petersburg among the Ingrians. But what European people is there that is not incalculably mixed? Are the Latins Latins, the Germans Germans, the Anglo-Saxons Saxons? Moreover, the non-Slavism of the Russians has been exaggerated: the Chuds,² among whom their ancestors lived, were weak tribes, probably already partially Slavized. From the very beginning of their history we see Great and Little Russians not only assimilators, but also excellent colonizers. And to-day they are displaying these two qualities more than ever. A kind of force which they have no wish to resist is pushing them by bands and in entire villages toward the Tchernoziom of the Ob, the meadows of the Yenesci, the rocks of Baikal Lake, the cold Lena, and the vast country, half sand, half soil, where the twin streams of central Asia, the old Oxus and the ancient Jaxartes, produce abundance in the midst of sterility.

¹ All these figures include Russia in Asia.

² The term Chud, here used to designate the Finns proper, is now restricted to the Veps, or northern Chuds, and the Votic or southern Chuds living round the shores of Lake Onega. — Ed.

The 45 to 55 million Great Russians,¹ who dwell principally around Moscow, are not as pure Slavs as the Little Russians, although they possess the hegemony among the Slavic peoples. But, whatever their degree of Slavism, the Great Russians or Russians proper are a courageous and strong race; a cohesive, patriotic, prolific nation, proud of its power, and intoxicated with the promise of its future; they are among the most richly endowed of mankind; flexibility of mind, a supple grace, a taste for the sciences, eloquence, the gift of languages, — these advantages are universally accorded to them. Many a Russian speaks with uniform ease all the civilized tongues of Europe. It has been said that they acquire foreign tongues with wonderful facility because their own has accustomed them in advance to awkward consonants, to sibilants and gutturals, to capricious orthographies, and to long words and complicated forms. Their language possesses many difficult articulations and an excessive wealth of forms; but the speech that is destined to resound ere long over the greater half of Europe and the larger part of Asia merits its distinguished fortune. However, Russian has yet to produce as many masterpieces as its sister tongues of the future, — the clumsy English, the French, poor, or rather pedantically impoverished, the forcible Spanish, and the nasal Portuguese.

We must not look for the best representatives of the early Great Russians around the old cities of the central principality, in Suzdal, Vladimir, and Moscow, in the land often reddened by invaders, and so long degraded by the misery and the infamy of serfdom. In countries where there are no high mountains, it is the forests, the marshes, the bogs, and the snow, that loyally guard the legacy of the ages; and for this reason the primitive customs of that "Slavia" which has won the supremacy, its ancient wisdom, its sayings and proverbs, its most childish and touching songs, its least distorted legends, exist chiefly in three governments of the extreme north, namely, in forest-grown Vologda, on the branches of the upper course of the Dwina; in the semi-Arctic plains, bogs, and *tundras* of Archangel, on the margin of the pagans and nomadic Little Finns; and among the lakes, birches, and firs of Olonets, near the borders of the Christian and sedentary Great Finns, who constitute the Finlanders.

The Little Russians, or Malo-Russians,² Russines, Russniaks, Ruthenians — for they are designated by all these variations of the same name — are evidently of purer blood than the Great Russians; they are of taller stature, they have more expressive countenances, and are of gayer disposition; their language, also, is more musical, and has undergone fewer changes; but they are frailer, less keen in the practical affairs of life, and more poorly fitted for trade, war, and rule. They are said to be very peaceable, and are fond of rustic life. Their true home-land is the fruitful Ukraine, which is fully as rich as any of the other provinces of the Black-Earth Zone, but they inhabit other governments also, along the Dnieper, the Donetz, the Dniester, and the upper course of the Duna: they occupy in whole or in part Kharkov, Yekaterinoslav, Khereson, Bessarabia, Podolia, Kiev, Poltava, Volhynia, Grodno, and Tchernigov; on the north, they spread sporadically as far as into the basin of the Vistula and the government of Vilna; lastly, outside of the empire, they people southern Galicia, and extend even beyond the Carpathians into northern Hungary, where they possess three *comitats*. In all they number about 25 millions, of whom fully 20 millions are subjects of the Czar of all the Russias.

The Little Russians, among whom dwell a million Jewish merchants and artisans, have a certain antipathy for their Great Russian brothers, whom they nickname bucks

¹ Including all the Russians of Asia.

² The Russian word *maloi* means little.

(*Katzap*), on account of their long beards. Their great numbers, the extent and fruitfulness of their territory, their language, with its living songs and some few books, their history, which has had both its brilliant and its gloomy days, — all these things tend to bind the Little Russians together. Settled, unfortunately, on the road from the Orient to the Occident and between the Baltic and the Euxine, split into Roman Catholics and adherents of the Greek faith, into Russians, Galicians, and Hungarians, they have been trodden under foot by many masters; subdued by Lithuania, which adopted Little Russian as the official tongue, they were, perhaps, about to denationalize their conquerors, when the latter were united to Poland. Without influence in Hungary, and in open conflict with the Poles in Galicia, their language and their customs are menaced on Russian soil, where already their dialect is banished from books, pamphlets, newspapers, and the theatre. The Russians might have left this kind of *patois d'oc* of the Great Empire to its own fate. Railroads, the demands of large cities, the stock exchange, business, amusements, cosmopolitanism, will infallibly destroy sub-nations; neither a few books nor a multitude of songs can alter the course of the future. Impassioned and brilliant poets are powerless to save the rich, harmonious tongue of the Little Russians, the dialect which probably has a greater number of graceful popular songs than any other in the world. Whether it can long survive or not, by the side of Great Russian, which is spoken from Saint Petersburg to Vladivostok, Little Russian is wholly master of itself nowhere except among the Ruthenians of Galicia, Hungary, and Bukovina: it lives there in a dozen newspapers, a few books and pamphlets, and four university chairs at Lwow.

The White Russians, so named, not from the hue of their complexion or hair, but from their light-colored costume, dwell to the number of 5 millions in the provinces of the upper Dnieper, on the upper Niemen, and near the sources of the Duna, in Minsk, Moghilev, Smolensk, and Grodno. There are no Finnic names in their country, and, since this land has been difficult of access from earliest times, it is probable that the inhabitants have been but slightly mixed, and that they represent the purest Slavs. Their dialect seems to hold an intermediate place between Great Russian, Little Russian, and Polish.

The Poles who occupy Poland in a compact body, and those who are dispersed, in small numbers, among the Lithuanians and the Little Russians, bring up the rear of the Slavs of Russia; back of these are many millions of Turks and Tatars, some millions of Finns, more than 3 million Lithuanians and Letts, 2 million Finlanders, 1½ million Germans, 3½ million Jews, besides Mongols, Georgians, Circassians, Armenians, Persians, Roumanians, Swedes, Greeks, Bulgarians, Serbs, etc.

There are in the whole empire 75 millions who profess the Greek faith, 10 million Roman Catholics, 12 million Mohammedans, more than 5 million Protestants, 3½ million Jews, 800,000 Armenians, and 500,000 pagans.

The Greek religion, to which two-thirds of the Russians bear a sincere devotion, is distinguished from Roman Catholicism chiefly in these three things: it does not recognize the Pope, it rejects the doctrine of Purgatory, and it permits the marriage of its popes or priests, many of whom are ignorant and coarse individuals, who have become ministers of God by inheritance, for the office of saving, edifying, and blessing often passes from father to son. The Russian Church is noted for its pomp and ceremonies, its rigorous fasts, and the unprecedented luxury of its festivals. The Russian who observes all its holy days keeps holiday half the year. The Greek temples have gilded domes.

In the cold Russian plains, the Steppe and the monotonous forests, all inhabited by the same men of the same Greek faith, speaking nearly the same Slavic tongue, are five sharply defined countries, namely, Poland, the Baltic provinces, Lithuania, Finland, and the Crimea.

Poland: The Vistula. — Poles and Jews. — The true name of Poland is the Slavic word *Polska*, the "plain," and, in fact, Poland has no hills, except in the south, in the direction of Cracow. There, Lysa Gora, or Bald Mountain, the culminating point, between Radom and Kielce, reaches an altitude of 1978 feet. All the rest of the country, consisting of tilled ground, meadows, woods, and swamps, is one vast level expanse. Poland discharges nearly all its waters into the Vistula, a river about 650 miles long, in a basin of more than 73,000 square miles, and having a mean flow



A ROAD IN LIVONIA.

of 26,500 cubic feet per second. The Vistula descends from the Beskides (a bastion of the Carpathians, 5000 feet in height), and separates Warsaw from its suburb of Praga. Beyond this city its volume is doubled by the waters of a stream in which are mingled the Bug, from Galicia, and the Narev, issuing from the wet forests of Bielostok, of Augustovo, and of Ostrolenka. The Bug is very long; but, as it rises in the interior of the continent, where the rainfall is scant, it loses its name before the Narev, which, though far shorter, flows nearer the sea, and on a low, slightly sloping surface, where the floods are gathered and stored in a multitude of regularizing lakes and swamps. When the Narev joins the Vistula, under the walls of Modlin, it has all the air of dictating the law to the stream from the Beskides. The Vistula bends to the west, and follows the course of the river of Ostrolenka. A small portion of Poland lies in the basin of the Warta.

Two hundred years ago the Poles ruled over the present Poland, Posnania, a part of Silesia, Pomerania, East Prussia, Galicia, Lithuania, the Baltic provinces, Volhynia, Podolia, and the Ukraine. Their daring nobles, always in the saddle, unjust and cruel to the poor masses, reigned from the Oder to the Dnieper, from the Baltic to the Steppes of the Black Sea. They were at that time the greatest of the Slavic peoples. But dissensions ruined this superb nation. Moreover, their empire had no homogeneity. The west was Polish, the north-east Lithuanian, the south and south-east Malo-Russian; and the Polish-speaking portion comprised scarcely a third of the 12½ million inhabitants whom the state then possessed on its 300,000 square miles.

Since the three partitionings of its territory, at the end of the last century, between Prussia, Austria, and Russia, this people has become extinct as a political power; but in what was formerly the heart of the kingdom, in Polish Poland, it still survives, with its traditions, its regrets, its hopes, its Catholic faith, and its vigorous and harsh language. Polish is the most developed of all the Slavic dialects, and has produced the greatest number of tender or forcible poems. The domain of this living tongue is not limited to Russian Poland; it extends to long distances, over countries in forced subjection to the three assassins of the nation. Polish is spoken in a part of East Prussia, of Posnania, of Silesia (Prussia); in a portion of Austrian Silesia, and in all northern Galicia (Austria); and, lastly (but by scattered families), in ancient Lithuania, and the basin of the Dnieper as far as Kiev. This makes 10 to 12 million Polish-speaking men.

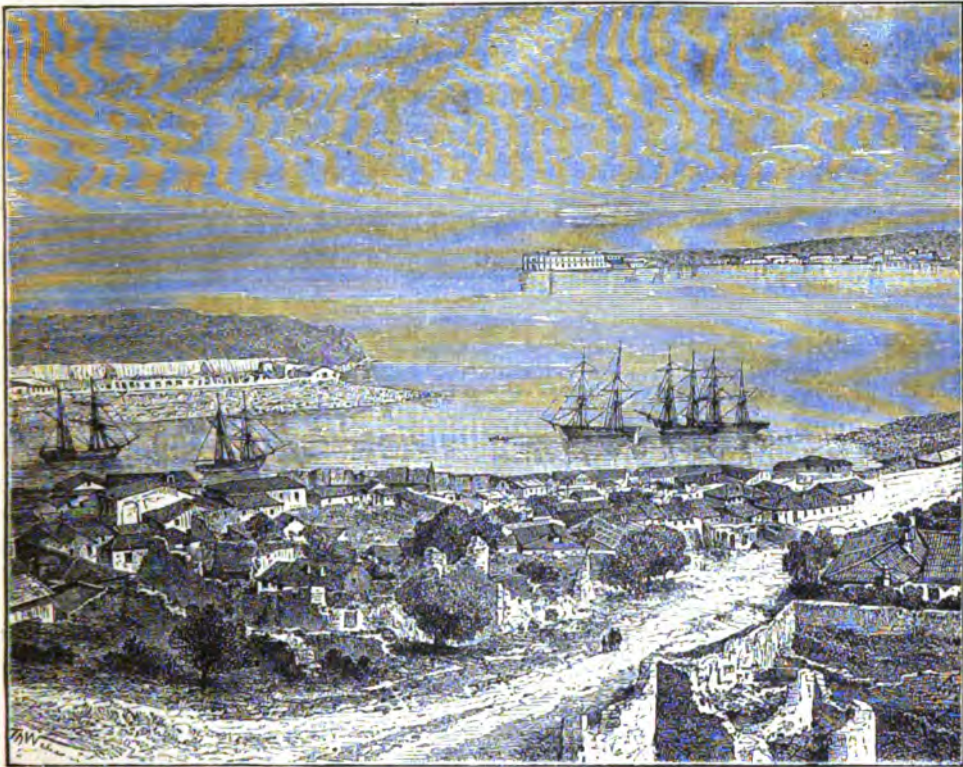
The district which still bears the official title of Polska covers 49,160 square miles, and contains 8,320,000 inhabitants, or 169 persons to the square mile. Of these 8 millions, 5 millions are Poles, 1 million Jews, 650,000 Russians (nearly all of whom are Malo-Russians), 450,000 Germans, and 300,000 Lithuanians. The Poles occupy the west, centre, and south, along the Vistula and Warta; the Malo-Russians the south-east, on the Bug; the Lithuanians the north-east, along the Niemen; the Germans live principally in the manufacturing towns, and the Jews are everywhere.

The ten times one hundred thousand Polish Jews comprise a seventh of all the Jews of the world; they are increasing marvellously. Here, as elsewhere, these cosmopolites, accustomed to all climes and to all tongues, multiply more rapidly than the people which presses upon them. If the present proportions of increase are maintained, by the year 2000 a half of this so-called Slavic people will be the posterity of the Chaldean shepherd blessed by Melchizedek; or, rather, — for not all the Israelites have Abraham to their father, — the Jewish sect will constitute a half of Poland. These Hebrews make use of a German *patois*, and speak at the same time all the tongues of the country; or, at least, they speak them sufficiently to buy, and sell.

The Baltic Provinces: Esthonia, Livonia, Courland. — The three Baltic provinces, embracing together something less than 37,000 square miles, support 2,318,500 inhabitants, or above 62 persons to the square mile. As their common name implies, they are situated on the Baltic, into which their principal river, the Southern Dwina (*Dvina Zapadnaia*), empties. This stream is called by the Germans the Duna, and by the Letts the Dangava. The mean flow of the Duna is estimated at 17,500 cubic feet per second, its length at about 625 miles, and the area of its basin at about 33,000 square miles.

The cold Baltic provinces are gloomily monotonous in bad weather. Their inhabitants see fewer rays of sunlight than flakes of snow on their bogs, lakes, meadows,

and forests. The townsmen here differ in race, customs, and language from the scant population of the country districts. They are Germans; while the peasants are Letts, Lithuanians, and Ehsts. The Germans constitute a well established aristocracy, and control the money, the schools, and the land. They number 125,000 to 165,000, according as the calculations are made by a Slav or a German, and, therefore, form from a fourteenth to a seventeenth of the population of the three provinces; in any case, they are too few to justify the appellation of German provinces often bestowed upon these divisions. At Riga, even, in the very centre of Baltic Germanism, the Teutonic element comprises only two-fifths of the town.



. THE BAY OF SEVASTOPOL.

But to return to the true peoples of this land, the Letts (who call themselves *Latvis*) possess for their great cities Riga and Mitau (Lettish *Jelgava*). They number about eleven or twelve hundred thousand, and occupy more than 23,000 square miles, embracing the south of Livonia and the greater part of Courland; and, outside of the Baltic provinces, a few villages of the government of Kovno, and the north-west of the government of Vitebsk, along the right bank of the Dūna, below Drissa. Their language, one of the most archaic among the Aryan tongues, resembles the older and still more beautiful Lithuanian; at least, as much as Italian resembles Latin. Its forms are fewer and less irregular. The Ehsts are Finnic in race and speech, and brothers of the Finlanders, from whom they are separated by the Gulf of

Finland. They people what they call *Maa Mees*,¹ and which embraces Esthonia, the north of Livonia, and a few districts in the governments of Saint Petersburg, Pskov, and Vitebsk. Their chief cities are Reval, a port, which they call *Harria*, and, in the interior, Dorpat, a university town, which they name *Tarto*. The 800,000 Ehsts speak a language closely allied to the Finnish, and, like it, also, too rich in vowels; what is lacking to both is a solid framework of consonants. This tongue slumbered for a long time, used mainly by peasants and beggars. The cities preferred German, the language of the government, of trade, of good society, and of the schools; but the Finnic dialect has roused again, and now has its newspapers, its writers and professors, and even its "paladins." The same is true of Lettish.

Of the three provinces, Esthonia owes its name to a Finnic people which has just awakened to new life; Livonia is thus called from the Livs, who are on the eve of perishing, and Courland was once the country of the Kures, a people now extinct. The Livs do not number more than 2400, and dwell, not in Livonia, but in Courland; they constitute a dozen hamlets of mariners and fishermen on the shores of the Gulf of Riga, near the Domes-näs. They are excellent seamen, well built, and vigorous, and content with their lot; they call themselves *Randalist*, or Coastmen, or *Kalamied*, which signifies fishermen. Beside their own Finnic dialect, they make use of Lettish outside of the family, in church and school.

Two islands, Oesel and Dagöe, flank the Esthonian seaboard on the west: Oesel contains 50,000 Esthonians, on some 2000 square miles; Dagöe, which is much smaller (433 sq. m.), recalls by the Swedish language of an insignificant part of its 12,000 islanders the period when this sea, these islands, and these provinces were subject to the valiant nation which inhabits the opposite shore of the *Oester Sjoen*,² or Eastern Sea; it is a low island, covered with meadows, forests, and swamps.

Lithuania and the Lithuanians. — The most beautiful of European Languages. — Ancient Lithuania, south of Courland, merged its history into that of Poland with the union which the two countries ratified in 1411, and again in 1569. Lithuanian is the language of the people, Polish that of a multitude of townsmen, nobles, and proprietors. It was from Lithuania that Poland received her most illustrious defender, Kosciuszko, and her greatest poet, Mickiewicz.

The region where Lithuanian is still spoken has been to some extent restricted; it never had any official importance, neither when the Lithuanians ruled over the Malo-Russians and even swayed the rising power of the Great Russians, nor when they had allied themselves, on equal terms, with the Poles. Lithuanian has disappeared from Memel, and it is no longer much used at Tilsit; but this noblest of all our languages seems now to have ceased to retreat, and the two million men who possess the glorious heritage are beginning to love it and defend it. It prevails in portions of Russia, Poland, and Germany; in Russia, in the government of Kovno, in a part of that of Vilna, in certain districts of Vitebsk, Minsk, Grodno, and in a little corner of Courland; — in Poland, in the north of the province of Suwalki; — in Germany, in the north-east of East Prussia. Its territory is bounded by a line which starts from Labiau (Prussia), north-east of Königsberg, passes near Grodno, to Dunaburg, and terminates at Libau on the Baltic. Its principal city is Kovno; its great stream, the Niemen, a current having a mean flow of more than 17,500 cubic feet per second, a length of 500 miles, and a drainage-area of more than 35,000 square miles. Outside the limits of the country where Lithuanian is spoken, but on the domain of old Lithuania, in the govern-

¹ Literally, "our country."

² The Swedish name for the Baltic Sea.



THE CATHEDRAL OF ST. BASIL, MOSCOW.

ment of Grodno, is the famous forest of the White Tower (*Bielo Wieja*); it covers 850 square miles on the plateau where the Narev rises; this forest, resembling those of early times, — solitary, deep, black, and boundless, — has been left standing in its ancient majesty, in obedience to a government decree, and the bison is still to be found here although he has disappeared from every other quarter of Europe.

The language spoken by the *Letuwininkai* (Lithuanians) is the least corrupted of all the Aryan tongues of Europe. It bears so strong a resemblance in words and forms to the Sanskrit that Lithuanian sentences can be constructed with Sanskrit terms, as, it is said, Portuguese phrases can be made with Latin. So, while from century to century the "civilized" were forgetting the primitive tongue, the rustic and for a long time pagan Lithuanians remained faithful to the poetic, plastic, sonorous, and teeming idiom of our race in its youth.

Finland. — The Finlanders call their country *Suomenmaa*, or Swampy Region, and their people the *Suomenlaisset*. The name Finland is derived from the Swedes,¹ who ruled over this territory from the middle of the twelfth century to the beginning of the nineteenth, after having converted the inhabitants from paganism to Catholicism; this latter faith, in time, gave place to Lutheranism.

Finland lies on the eastern shores of the Baltic, which the Finlanders name *Ita Meril*; it opposes to the sea a breakwater of *skaeren* like Sweden, and a "skjaergaard" like Norway. Out of 144,250 square miles, the forests occupy 81,000, and the countless lakes 18,500; some 40,000 square miles is in waste lands which are possibly capable of being made productive, or in soil which will never be fruitful notwithstanding the comparative mildness of the Finland climate (due in part to the vast area covered by the scattered lakes). Rugged rocks and moss-covered plateaus in the north; low hills, or *selkæ* (to use the Finnish term for "heights of land"), none of which, outside of Lapland, reaches an elevation of 1200 feet; boulders, isolated or in groups, bogs, swamps, extensive moors, — no part of all this surface gives promise of opulent harvests for Finland; grain is nevertheless grown as far north as the 68th or 69th parallel of latitude — that is, even beyond the Arctic Circle!

Among the lakes, which comprise an eighth of Finland, and which, in the south, nearly surpass the solid land in extent, the largest is *Säima*, a granite basin of 680 square miles. It discharges the Vuoxen, a powerful river 1300 feet broad, and draining 24,775 square miles. A little way down-stream, on its route to Lake Ladoga, the Vuoxen descends in the Imatra rapid; driven by the slope, the waters enter a channel 130 feet wide, and in a distance of 1066 feet fall 69 feet; these waters, which were calm and blue to the very verge of the *koski*,² become a thunder, a white cyclone, a tempestuous rush of wind and foam.

Of the 2,300,000 inhabitants of Finland, about 1,850,000 are Finlanders, and 310,000 Swedes; the few remaining thousands are divided among Russians, Germans, Lapps, and "foreigners." After having slowly gained on the Finnish for more than six centuries, Swedish, which was the tongue of the nobility, of the bourgeoisie, of politics, of poetry, of literature, and of science, began to retreat before what was for a long time the despised jargon of the common people. The two great cities, Helsingfors (pop. 53,000) and Åbo (pop. 26,500), the latter the old capital, the former the new, are almost exclusively Swedish in speech, and this idiom prevails, here and there, in narrow tracts along the seaboard, more especially in the west, on

¹ The term Finland — Fen Land — is said to be the Swedish translation of *Suomenmaa*. — Ed.

² Finnish word meaning fall or rapid.

the Baltic; it prevails, likewise, in the islands, notably in the Åland group, an archipelago of granitic islands and islets lying nearer Scandinavia than Finland.

Finnish, the triumphant rival of Swedish, has its great idyllic, charming, childish poem, the *Kalevala*,¹ a monument of very ancient times; it is an exceedingly soft language, almost too rich in vowels and diphthongs, and lacking in consonants. One might mistake it for Tahitian or any other of the Polynesian tongues, though it contains much longer words, for Finnish belongs to the class of agglutinative or agglomerative idioms, in which ideas and shades of ideas are crowded into terms of remarkable length. Cousin to the tongues spoken in Russia and Siberia by the most degraded tribes, brother of Esthonian, a relative of the language of the proud-spirited Magyars, Finnish is a Finnic dialect, and the people who use it are a part of that Finnic race which has lost immense domains before the advance of the Slavs; but the Finlanders are not less mixed than other nations; a great deal of Slavic and of Scandinavian blood courses through their veins; besides, perhaps, the blood of twenty nations lost in the gloom of antiquity.

Already the number of Finnish newspapers (42) is nearly double that of the Swedish journals (26) published in the Grand-Duchy of Finland (such is the official title of this country, which enjoys a perfect autonomy in the bosom of the massive Russian Empire); and a sheet in this soft and harmonious tongue appears in the United States, in the far-away Michigan town of Calumet, the feeble echo of an infant Finland.

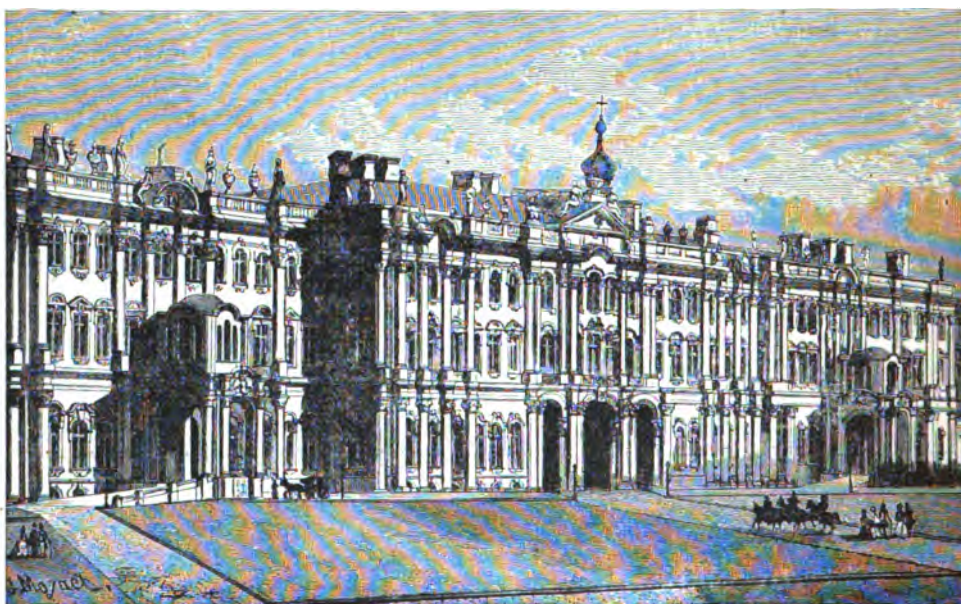
The Crimea. — If the low, slender isthmus of Perekop should give way at any point, the Crimea would become an island; but this strip of land prevents the Sivash and the Black Sea from making anything but a peninsula of it; it embraces about 10,000 square miles. It is the Sivash or Putrid Sea which separates the Crimea from the Russian mainland on the north; on the east, it is the Strait of Kertch. The latter forms the outlet of the Sea of Azov into the Euxine. Through the Strait of Kertch flows living and beautiful water, but the Sivash is an unsightly, shallow pond, roughly treated by the winds, and malodorous during the low-water season and when the evaporation leaves vast beds of salt around it; except for Arabat Spit, a narrow tongue of land 70 miles long, the Sivash would have no independent existence, but would become again what it was before the sand, tides, and winds raised this slender dike, namely, a gulf of the Sea of Azov; it has no communication at present with the latter,—except in the extreme north, by a passage less than 500 feet broad.

The Crimea supports the Tchadyr Dag (5449 feet), a limestone chain which plunges down to the Black Sea on the southern coast, between Sevastopol (pop. 34,000) and the Strait of Kertch. The northern and central portions of the penin-

¹ The *Kalevala* is a sort of epic poem concerned entirely with the mythology or folk-lore of the Finnish peasantry. Until the early part of the present century it had existed only in the shape of scattered songs recited by the people and sung by the minstrels. A small collection of these was first begun in 1822 by Dr. Zacharias Topelius. In 1835 an edition was published by Dr. Elias Lönnrot. This was the first attempt at a complete and systematically arranged collection. Dr. Lönnrot made several journeys into Finland, taking down the songs from the lips of the peasants, or recording them as they were recited by the minstrels. In this way he collected 12,000 verses, in 32 runes or cantos. Later, after more extended researches, he issued a new edition, of 22,793 verses, in 50 runes. Translations soon appeared in Swedish, German, and French. A partial translation into English was made by the late Professor John A. Porter of Yale College, and published in 1868. Longfellow's *Hiawatha* is said to afford an excellent illustration of the structure of the *Kalevala*. Max Müller ranks the *Kalevala* as the fifth national epic of the world, side by side with the *Iliad*, the *Mahābhārata*, the *Shahnameh*, and the *Nibelunge*. — Ed.

sula are flat and steppe-like, devoid of grace, life, or beauty. And in the vicinity of the isthmus the climate of the lowlands is hardly superior to that of the neighboring districts on the lower Don and lower Dnieper; while at the southern base of the mountains, between the cliffs and the deep sea, the sun is warm, the waves are blue, the vegetation brilliant and varied, ranging from the olive-tree and the laurel to the Sea-pine and the mighty trees of our forests of the temperate zone. In the sheltered valleys, the yearly mean rises to more than 54.5° F.; for Russia, this is a remarkable temperature.

From 275,000 to 300,000 men occupy the Crimea. The inhabitants were formerly Turkish in language and lineage. By formerly we mean in the first half of the present century. It is scarcely a hundred years since the peninsula became a part of the Russian Empire (1784). Down to 1855 the Turks constituted the large majority of the



THE WINTER PALACE, ST. PETERSBURG.

population. The Turks, or, as they are called, the Tatars, of the Crimea, the mild, rustic, laborious Nogai, left the country in multitudes after the Crimean War, seeking happiness, justice, and fraternity among their cousins the Ottoman Turks, under the rule of the Commander of the Faithful. White Russians, Malo-Russians, Bulgarians, and Greeks have taken their place, and here, too, Slavia is devouring everything around her; she claims to-day fully two-thirds, and perhaps three-fourths of the Crimeans.

Growth of the Russians.—What is taking place in the Crimea is being repeated everywhere throughout the length and breadth of the empire. The Slav is pushing his cities of merchants, his villages of peasants, and his stanitzas of Cossacks into every corner of the Russian domain; and nearly everywhere he is stifling the allophyle and allophone. No obscure valley in the most distant Asia of the North, no cirque hol-



A RUSSIAN PRIEST.

lowed out of the gigantic mountains, but sees, on the morrow of the conquest, Slavs mingling with its Turks, Mongols, or Finns, colonists mixing with its nomadic or settled inhabitants, and Christians associating with its Mussulmans, Buddhists, or pagans. Here the Slav is the Great Russian, for the reason that in every colonized country the parent tongue never allows the lesser tongues and dialects of the nation to survive around it; no language, for example, has taken root in the United States by the side of the literary English. Russia is easily equal to this immense colonization, for, though the death-rate is high, the births more than abundantly fill up the gaps. In 1880, Russia-Siberia alone, not including Poland, Finland, Caucasia, or Central Asia, cast into the scale of her destinies 3,858,873 births, against 2,816,621 deaths; she then gained 1,042,252 souls, enough to be able to challenge England's formidable display and Germany's false grandeur.

Cities. — About a dozen cities contain more than 100,000 inhabitants each.

Saint Petersburg (1,003,315) was founded in 1703 by Peter the Great, near the Gulf of Finland, on the banks of the Neva, which is free, on an average, 218 days in the year, and frozen 147. The city was built on a cold marsh, in a wholly unattractive region, less for the sake of the fine stream than to menace the Swedes in Finland. It was a challenge to nature, for the foundations of its palaces had to be laid in the swamp; to-day even, when the west winds set back the waves of the Gulf of Finland, the Neva is driven up-stream and threatens the very existence of the city. Saint Petersburg exhibits the beauty and the monotony of a regularly laid out town; the streets are broad as boulevards, and the granite edifices are massive as barracks. Cronstadt (pop. 43,000), not far away, on an island in the gulf, is a strongly fortified port.

"Holy" Moscow (753,000), endearingly named by the Russians *Moskva Matushka*, "little mother Moscow," the "city of forty times forty spires," occupies both banks of the Moskva, a small river, which is frozen on an average 152 days out of every 365. With a larger area than Paris, but only a third as populous, Moscow gravitates about the Kremlin, the great national monument, at the same time citadel, metropolitan church, monastery, palace, and barracks. From the spires with gilded or painted domes that crown its three hundred fifty to four hundred churches can be seen huts, the winter palaces of the nobility, tilled fields, waste lands, ponds, woods, and gardens, city blending with village, and country with city. Moscow is the centre of Russia; it is the "holy of holies" of the empire, the altar of the father-land, the Russian city *par excellence*, much more than European and cosmopolitan Saint Petersburg is.

Warsaw (455,000), on the turbid Vistula, is the soul of Poland. It is nearer the centre of Europe than any other of the great cities of this division of the globe.

Odessa (304,000), a port on the Black Sea, is a modern city, less than a hundred years old; it exports immense quantities of grain. Lisbon vainly boasts of being founded by Ulysses, but the name of Odessa is in fact that of the wily navigator; this monumental city, built on the margin of the Steppe, is thus called from an ancient Greek colony founded on these shores which bore the name of the hero Odysseus.

Riga (175,000), on the Dūna, 7 miles from where it enters the Gulf of Riga, is the mart and chief port of the Baltic provinces.

Kazan (141,000) is an old Tatar capital, near the confluence of the Volga with the Kama.

Kishenev (130,000) is in fact named *Kissinon* by the greater part of its citizens, who are of Roumanian stock, as are most of the inhabitants of the province of which

this city is the capital.¹ Few towns even in Russia look so much like an overgrown thatched village.

Kharkov (189,000) lies on an affluent of the Donetz.

Kiev (170,000), the "mother of Russian cities," the sacred town of the Malo-Russians, is visited by multitudes of pilgrims. Its magnificent situation might have made it, and might yet make it, the capital of the Slavs, if Slavia had not taken such giant strides toward the east, thus relegating the old city into the west of the Slavo-



CATHERINE PLACE, ODESSA.

nian lands. Kiev lies on the Dnieper, among the Little Russians, not far from the Poles, between the mighty nation of the Great Russians and the small Slavic peoples of Austria and Turkey.

Saratov (123,000) is on the lower Volga.

Then follow: Vilna (103,000), once the metropolis of Lithuania, on the Vilia, a tributary of the Niemen; Orel (79,000), on the Oka, in central Russia; Rostov (73,000), on the Don, near its mouth; Nikolaiev (67,000), having extensive dock-yards, on the estuary of the Bug, etc.

¹ Bessarabia.



THE BROCKEN, IN THE HARZ MOUNTAINS.

GERMANY.

Mountains of the South. — Northern Lowlands. — Germany (German, *Deutschland*) looks out on the north over the almost inland Baltic and over the open North Sea; on the south it touches the Adriatic, which leads into the Mediterranean; it is united to the Hungarian, Slavic, and Roumanian Orient, and almost to Asia, by the Danube; it forms the connecting link between Latin Europe and Slavic Europe. Including Alsace and Lorraine, Germany embraces about 211,000 ¹ square miles, with a population of 49,424,135, or about 234 persons to the square mile. Germany is much more densely peopled than France, although its soil is less fertile, and though it lies under less indulgent skies. The surface rises on the south toward the Alps; on the north, it slopes toward the sea in a vast plain, which would be covered by the ocean if the waves should be raised 500 feet. Between the plain and the Alps are undulations of mediocre altitude.

The Alpine giants lift their heads in France, Switzerland, and Italy. The less elevated bastions which raise an enormous barrier in the south between the Germans and Italians rear their battlements, likewise, into the realm of eternal cold. Such, for example, are the Orteler, Oetzthal, and Stubay groups, and the Hohe Tauern (dominated by the obelisk of Gross Glockner); all these mountains of gneiss, schist,

¹ Exactly 211,168.

mica-schist, and granite, surpassing 10,000 feet, and reaching nearly 13,000, have icy rivers flowing down through their valleys from the great snow-masses; but these summits have not been in Germany, but in Austria, since the slaughter at Sadowa (July 3, 1866); it is in the Bavarian Alps that we must now look for the culminating peaks of Germany; the loftiest of all, the Zugspitze, has an altitude of 9702 feet.

The chains of central Germany are not more than half as high as the Bavarian Alps. The greater part do not attain an elevation of even 3300 feet, and only one, the Giant Mountains, or Riesengebirge, from which the Elbe descends, surpasses 5000 feet. Not one of these graceful heights, which differ widely from the sterile summits of the Alps, wears the spotless ermine of eternal snow.

The Black Forest, or Schwarzwald (4902 feet), on the right of the Rhine, at the sources of the Danube, has grand fir plantations. The Odenwald continues the Black Forest beyond the Neckar, as far as the Main. The Spessart, half encircled by a bend of the Main, is one of nature's temples. Even in Germany, that land of wonderful forests, there are no oak or beech woods comparable to those which adorn this low *massif* of 2018 feet. Between the Main and the Weser the Rhön (3117 feet) astonishes us with its brazen sterility. The Vogelsberg (2530 feet), near the Rhön, is another desolate mountain-group, and one of the largest known masses of basalt. On the left bank of the Rhine, the Eifel presents a sterile plateau, dotted with ancient craters, which have been changed into lakes.

In the centre of Germany, the Thuringian Forest, or Thüringer Wald (3228 feet), at the sources of the Weser, is the German Arcadia; the Harz, isolated and inflexible in the great plain, culminate in the famous Brocken (3743 feet); the Fichtelgebirge (Pine Chain), from whence the Main flows, rears its tops of granite and gneiss to the altitude of 3487 feet; the Erzgebirge (Ore Mountains) attains an elevation of 4183 feet; it forms one of the ramparts of the immense fortress of Bohemia, as does also the Bohemian Forest, or Böhmer Wald; the latter (4774 feet), in a moist climate, is a small California, with gigantic conifers towering 150, 160, or even 200 feet. Another of the Bohemian walls, Riesengebirge, covers Saxon Switzerland with its superb cliffs and cubical mountains. The Schneekoppe rises to the height of 5253 feet.

At the extreme north-east of Germany, on the Russian frontier, in East Prussia and Pomerania, is the so-called Seenplatte (Lake Plateau). This is a plain rather than a table-land, but it possesses the beauty of tranquil lakes, deep forests, veiled, limited horizons, and huge boulders; the music of the winds among the pines lends a touching and saddening influence to the scenery in this harshest clime of the German Empire.

From the low mountains, for hundreds and hundreds of miles, the broad German plain stretches out toward the seas, joining on the east the plains of Russia, and on the west those of the Low Countries and of northern France. It is owing to the size and at the same time to the slight elevation of these cold and monotonous *landes* that the mean altitude of Germany is not above 700 or 702 feet, or about half that of France. Around wooded lakes, on the margin of mighty forests, at the base of dunes cemented together by pines, at the foot of the solitary hills uplifted from the level expanse, plucky peasants till the German lowlands; they wrest from the soil all it has to give: but their toil barely brings them the means of life; it never enriches them. And yet this plain supports as many men as though it were fertile, and its inhabitants, through their city of Berlin, are ruling Germany to-day more completely than ever before.

However, of all the peoples of Germany, of the "land so marvellously beautiful under its coronet of oaks," those who dwell on these vast barren wastes (where rich valleys, fine meadows, and fertile, drained swamps are not wanting) are evidently the Germans who have the least foreign blood in their veins. In certain districts on the left bank of the Elbe, Polabe, a Slavic idiom, was spoken down to the beginning of the present century.

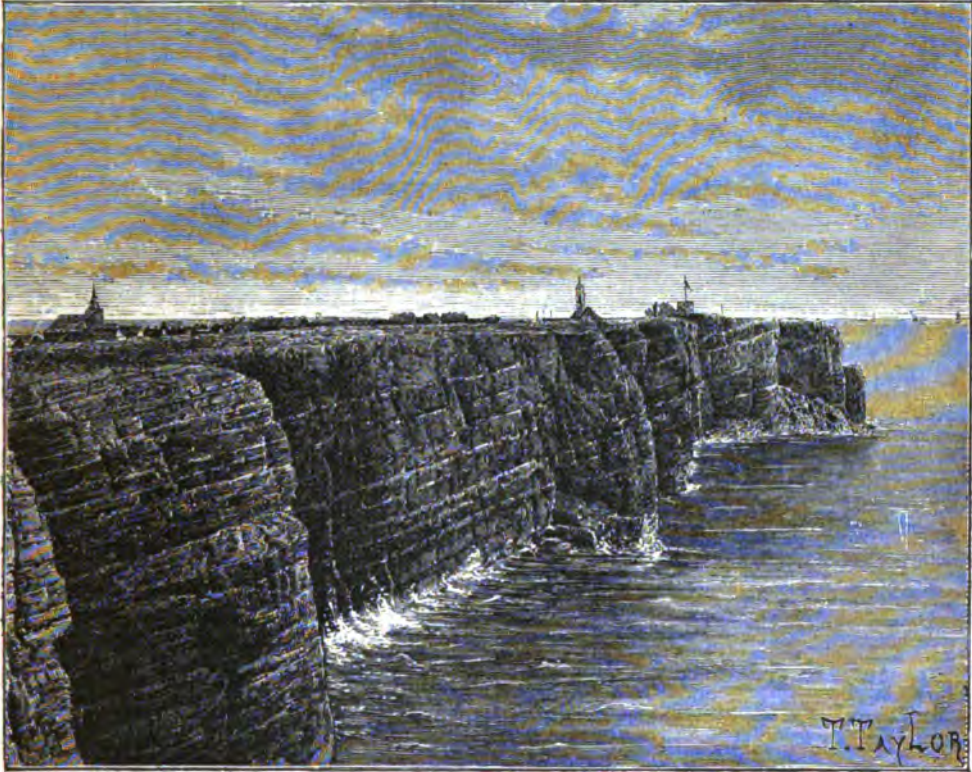
German Rivers: The Elbe, the Rhine, the Danube. — The German coasts, which are deficient in natural ports, present but one island of any considerable size, Rügen, in the Baltic, opposite Stralsund. This land of chalk, fretted by billows that are gradually devouring it, is carved into peninsulas, islets, and reefs. Wendic, a Slavic dialect, was once spoken here; but for five hundred years German has been the only language in use. The old tongue became extinct in 1404, at the death of an aged woman, — the last individual who had not forgotten it.

On the Baltic shores, the large rivers flow out through "haffs," or lagoons, which are separated from the sea by alluvial strips, called *Nehrungen*. The haffs communicate with the Baltic by means of narrow channels. The Niemen, or Memel, a Russian and Lithuanian stream rather than German, enters the Kurische Haff or Haff of Courland (625 sq. m.), beyond Tilsit, by several branches. This haff is connected with the sea through Memel Deep. The Pregel (the river of Königsberg) and more especially the Vistula are rapidly pouring alluvia into the Frische Haff (331 sq. m.), which opens into the Baltic by the Pillau Tief. In the same way the Oder is imperceptibly contracting the Great Haff or Haff of Stettin, which communicates with the sea by means of three openings. The Oder, more than 550 miles long, in a basin of about 17,400 square miles, descends from a Moravian mountain. Its sources are therefore Austrian. It flows through Polish territory until it comes in contact with the Neisse; it passes Breslau, and gains the Stettiner-Haff, below Stettin. Its chief affluent, the lowland Warta, remains on Polish territory almost to its mouth. On the North Sea, with its tides and tempests, no Nehrung has obstructed the estuaries of its streams; the stormy waves will not permit the winds, the alluvia, the gravel, and the sand to construct littoral cordons along its coasts. On the contrary, here, as on the Holland seaboard, the waters are destroying the low shores, and the old coast is indicated by a line of eroded islands; but the German, like the Netherlander, protects the menaced soil as far as possible by dikes.

The Elbe, the central artery of Germany, reaches the North Sea below Hamburg, after a course of more than 700 miles, in a basin of 55,340 square miles. It issues from Bohemia, fully formed, fiery, but turbid, with a mean flow of 5300 cubic feet, through superb gorges in sandstone mountains; it winds past Dresden, and penetrates into the great plain. Far out to sea, facing its estuary, an English island, Heligoland, long jealously watched the German coast. Eroded by the waves even more than Rügen, Heligoland has become a jagged islet of less than one square mile; it rises as a lofty sandstone cliff. "Green country, red cliff, white shore, — such is Heligoland," as made over to Germany by the British in 1890.

Another river of central Germany, the Weser, likewise flows into the sea opposite Heligoland. Its parent stream is the Werra. Near Minden it abandons the varied scenery of the mountains for the monotony of the lowlands. Its great port, quite well inland, Bremen has, like Hamburg, already embarked many hundreds of thousands of emigrants for America. The Weser, which is much shorter than the Elbe, is some 300 miles in length, and drains less than 20,000 square miles.

The Rhine (820 miles),¹ does not rise "at the foot of Mount Adula, among thousands of reeds." Springing from glaciers and fed by snow-masses, Switzerland transmits it to Germany, already broad and swift, and of a clear, deep green color, after having been purified in the Lake of Constance. From the Basel curve, where it becomes wholly German, its course is direct. It was once very broad at this point, with arms and islands; but the tendency to divide into branches has been curbed in the interest of navigation, and many of the windings have been cut off by leading the water into straight channels. The Rhine enters the splendid plains of Alsace and Baden, between the Vosges and the Black Forest. Then carrying with it two



HELIGOLAND.

beautiful German rivers, the Swabian Neckar and the Franconian Main, below Mainz, it makes its heroic way through mountains of slate. This "cut of the Rhine," with its ruins on the sombre crags, those feudal eyries with proud and impressive names, is like a sanctuary to Germany, because of its wondrous beauty, but still more for all the poetry which environs it, its memories, legends, and charming *Lieder*, and the *Lorelei*, that treacherous enchantress celebrated in adorable verse. It receives the Lahn and the Moselle, then below Cologne it flows through almost level lowlands, which are continued by the flat-lands of Holland. Here the delta of the Rhine blends with the deltas of the Meuse and the Scheldt. Its mean flow is estimated at 78,400 cubic feet per second at Emerich, on the thresh-

¹ The latest authority, Strelbitsky, makes the length of the Rhine 710 miles. — ED.

old of the Low Countries, and its basin (including the Meuse) at nearly 100,000 square miles.

The Danube (German, *Donau*), a very much larger stream than the Rhine, is German in its upper course. Swollen by the green torrents from Bavaria, then more than doubled by the Inn, a Swiss and Tyrolese river, it enters Austro-Hungary, where it bathes the capital cities, Vienna and Budapest, and then hurries on to bury its waters in the far-away Black Sea.

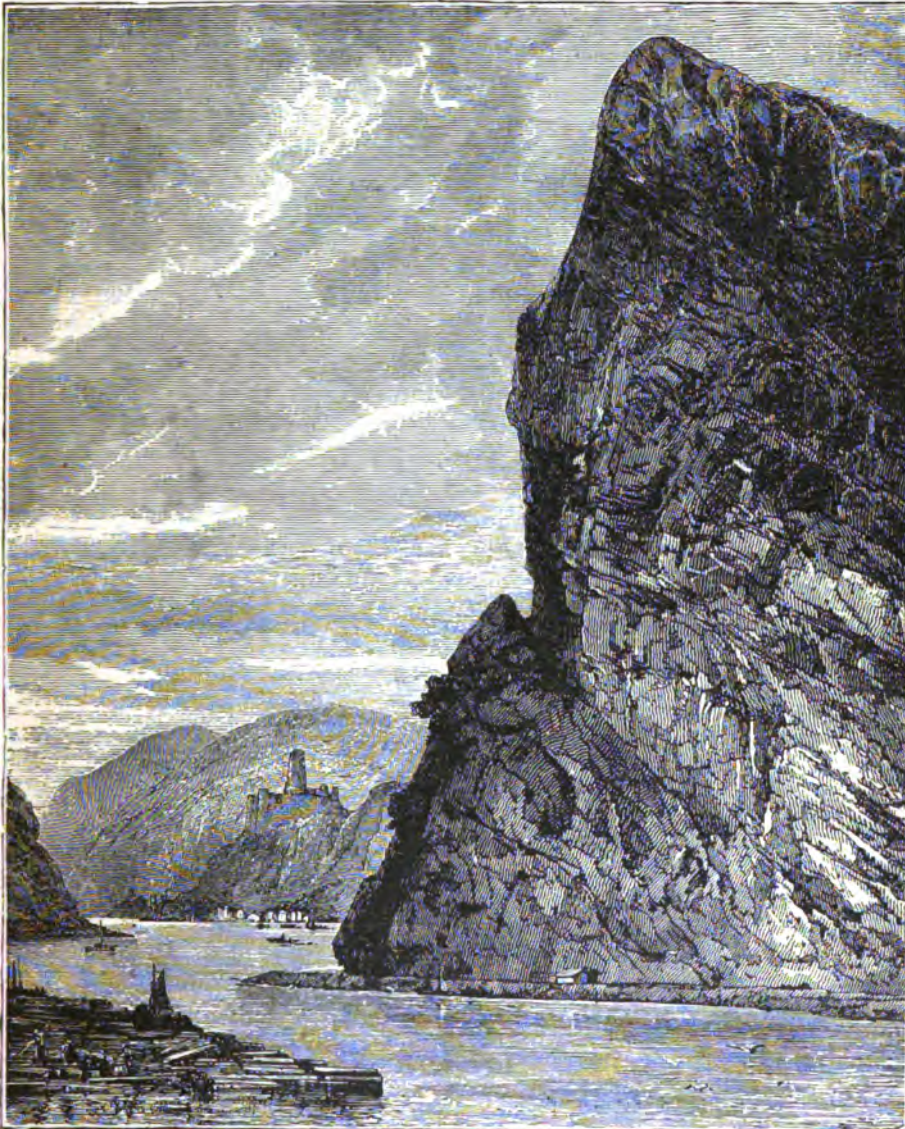
Climate. — Germany possesses a uniform climate. Altitude has the same effect in the south that latitude has in the north. Augsburg and Munich in Bavaria have even a lower mean temperature than Breslau and Stralsund, in Prussia, or Copenhagen, in Denmark. Hamburg, near the North Sea, has nearly the annual mean of Inna-brück, which is not far from Italy. The cold increases from west to east instead of from south to north. The farther we go from the Rhine, the climate of which is not without severity in winter, the more the skies become Russian instead of French. The yearly rainfall varies between 21 inches in the north and 26½ to 27 in the south. In France it is not less than 30.3 inches. The mean annual temperature ranges between 42° and 44° F. in the north-east and 52° and 54° in three privileged valleys, namely: on the Rhine, from Spire to Cologne; on the Neckar, below Stuttgart; on the Main, from Würzburg to Mainz. The hills of the Moselle, the Rhine, and the Neckar boast of their sparkling wines; but Germany's real superiority is in her forests, which embrace 53,500 square miles. Some 35,000 square miles are covered with sombre pines, firs, and larches, and 18,500 with deciduous trees, such as oaks, birches, aspens, poplars, and beeches.

The Germans. — **The German Language.** — The old confederation,¹ which left without its pale fewer Germans by far than does the Germany of to-day, contained 52 million men, of whom 8 million to 9 million were Slavs, 150,000 were Danes, 150,000 Lithuanians, 500,000 Italians, and 10,000 to 12,000 Walloons. At present, the German Empire, which is much smaller though much more densely peopled than the Confederation, has 49,424,135 inhabitants; the vast majority of these are Germans, strongly mixed, in early times, with Celts, Slavs, Lithuanians, and perhaps Finns, and later with French and Jews. The population increases rapidly, notwithstanding emigration. According to official statistics there is a yearly average of 1,750,000 to 1,850,000 births, 1,200,000 to 1,250,000 deaths, and 200,000 to 250,000 emigrations. This leaves a gain of 300,000 souls for the ambitious empire.

As Germany is destitute of natural frontiers, except in the south, there has been an uninterrupted overflow of the population into the surrounding States. In former times the Germans were tempted into more than one Slavic or Hungarian land, and even into the Russian Steppes and along the Volga, by potentates who were in need of peasants, mechanics, and merchants for their various kingdoms. And, aside from

¹ The *Germanic Confederation*, established in 1815 by the Congress of Vienna, was composed of 39 states, each of which was represented in a permanent diet which convened at Frankfort and which had cognizance of all matters of common concern. Austria was the most influential member of the bund. The revolutionary movement which swept over Europe in 1848 brought about radical changes in the governments of many of the smaller states, and shook the very foundations of the most powerful. Two years later, the German states stood sharply divided into two hostile groups, one group rallying around Prussia, the other around Austria; but it was not until 1866 that the struggle occurred which resulted in the final exclusion of Austria from Germany. The war lasted seven weeks. The decisive battle was fought July 3, 1866, at Königgrätz, and is known as the battle of Sadowa, from a small village a few miles from Königgrätz. — Ed.

these calls, families from Swabia, the Palatinate, Alsace and Lorraine, Saxony, North Germany, and also from Flanders and Friesland, emigrated to the unpeopled regions of the east and south-east. Noiselessly, and, as it were, stealthily, — at least history, which occupies itself with wars, scarcely mentions them, — they added furrow to fur-



THE ROCK OF THE LORELEI.

row, built wood-chopper's hamlets in the forests, and filled the cities with shopkeepers and craftsmen, from whom sprang, in time, a laborious, painstaking bourgeoisie, the envy and admiration of the vulgar herd. They won in this way large tracts from the southern, central, and eastern Slavs, and from the Lithuanians; they acquired the

once Slavonian basins of the Elbe and Oder, made inroads into the basins of the small streams of East Prussia, and pushed their way as far as the Polish Vistula, to say nothing of the Baltic provinces, where they now constitute the towns-people. This invasion is still going on, and German-speaking Jews always form the advance-guard ; but Germany has ceased her imperceptible annexation of the Orient. The Orient has awakened, and the future of the Germans may be dictated by the Slavs of the vast empire.

The Germans have been enamoured of themselves so long that they almost forget that the world did not begin with them ; they were not its Alpha, nor will they be its Omega. Doctors, preachers, historians, and poets, all the educators and instructors of the nation, from the rector magnificus of the universities, to the humblest village *Schulfuchs*, have been fostering, for eighty years now, the spirit of self-laudation. Conceit mars their fine books and their very learned reviews ; the reader is irritated by the untiring enumeration and deification of German traits and virtues, German deeds of prowess, and the glories of the German past and the German future.

If this prolific nation had possessed its boasted inflexibility, it would have Germanized Europe. It is the malleability of the Germans which has weakened them, as well as their readiness to conform to law and order, their innate love of foreign things, and their fondness for languages. Many a district where not a word of German is now spoken is peopled wholly by Germans, who have retained their Teutonic names, or have travestied them in Slavic, Hungarian, or Italian ; among the supporters and defenders of the national claims of the Austrian Slavs (Czechs, Serbo-Croats, or Slovenes), as well as of those of the Magyars, are found not only Slavs and Hungarians, but also Germans, whose ancestors, perhaps, changed their names at the same time with their allegiance ; or, what is more probable, pressed upon by the surrounding nation, children of that nation by their mothers, and bound to it by marriage, these men have abjured the German half of their ancestry.

As the Germans have no colonies of their own, they colonize with the English, in countries where English is spoken ; with the Russians, wherever the chief of potentates rules ; they furnish millions of settlers to the United States, and husbandmen, professors, and merchants to the nations of South America ; in Africa they are establishing themselves in the east, the south-west, in Cameroons and Upper Guinea ; they are flocking to Australia, and even as far as New Zealand and the islands of the South Sea. The Germans, who have been converted by their erudite teachers into zealous advocates of everything that is Teutonic, are by nature the cosmopolites *par excellence*. The Saxons, the Hessians, the Swabians, and, to a less degree, the Prussians and Bavarians, have the entire earth for their country.

This people of colonizers is also a people of scientists, of relentless, profound, over-exact, indefatigable investigators ; but its "doctors" are confused to an unpardonable degree in their ideas, and especially in their phraseology. Nearly all of them write too much and badly. The heaviness of their books is due chiefly to the character of the language. The German tongue is rich, possessing a virility not wholly devoid of harshness, and yet capable of great sweetness ; it is superb in poetry but uncouth in prose, complicated, pedantic, encumbered with separable particles, which are often very far from the words to which they belong, and, lastly, burdened with compound words, which do not always correspond to a very precise idea. It is divided into two very dissimilar dialects, High German (*Hoch-Deutsch*), the literary language, which is marching rapidly to the conquest of the whole German

Empire, and Low German (*Platt-Deutsch*), which is spoken in the northern plain by some twenty million men. Platt-Deutsch is undergoing transitions in the south-west, where it is blending with Dutch and with Flemish.

Of the 49 million inhabitants of the empire, over 3 million are Poles, Lithuanians, Danes, French, etc., who do not speak German; but to offset these there are more than four times as many German-speaking people living in compact bodies on the confines



A GERMAN.

of the *Vaterland*, namely, 10 million Austrians, more than 2 million Swiss, about 40,000 Belgians, and Luxemburgians to the number of more than 200,000. Moreover, there are some 1½ million Germans scattered through the Russian cities and concentrated in certain districts of the lower Volga, of Little Russia, of Bessarabia, etc. These Russo-Germans, who have maintained their nationality down to the present time, must soon lose their separate existence now that the Russian government has retracted all the peculiar privileges granted to the colonists, and especially now that railroads are

establishing close relations between all parts of the empire.¹ These 1½ million men are lost to Germany, as are also the 3½ million Germans of the United States and the 250,000 of the Dominion of Canada. The only true Germans outside of Europe are to be found in South America. The colonists who settled in the southern provinces of Brazil, São Paulo, Paraná, Santa Catharina, and São Pedro do Rio Grande do Sul, have preserved their nationality to a marvellous degree among the Lusitanians and the Indians; but they are few in number, and they will soon be stifled by the Latin surroundings.

More than 30 million of the inhabitants of the German Empire are Protestants, more than 17 million Catholics, and about 563,000 Jews.

Political Divisions. — The political divisions of Germany, which were very complicated before the war that ended with the thunderbolt of Sadowa, are still remarkably peculiar. Prussia, which, previous to 1866, was composed of two distinct sections, one comprising the plains of the north-east, the other the Rhenish provinces, has since annexed Hanover, Schleswig-Holstein, Hesse-Cassel, and Nassau, and subordinated to her rule Saxony, Oldenburg, Brunswick, and a half of Hesse-Darmstadt, together with some fifteen unimportant duchies and principalities bearing high-sounding names. Prussia was compelled to relinquish her hold on Luxemburg, but on the south of the Main, which is considered the boundary line between Prussian Germany and the so-called Independent States, the Grand-Duchy of Baden, Würtemberg, Bavaria, and Alsace-Lorraine are subject to her; Austrian Germany, excluded from the federation, forms with Hungary and the Slavic provinces the Austro-Hungarian Empire, the capital of which is Vienna, a German city.

Prussia. — Prussia proper, not including the petty duchies and principalities, supports 38 more persons to the square mile than France, notwithstanding the great inferiority of her soil and climate. The census of 1890 returned 29,959,000 inhabitants, on 134,468 square miles. Three millions of these men are in no sense Germans. The Danes in the north of Schleswig and the Poles of East Prussia, Posenania, and Silesia still cherish the hope of being re-engrafted on the parent trunks. The Poles have held out well against the long-continued efforts to Germanize them through the schools, law, government, and the army, but they are steadily losing ground by the sale of numerous estates to the German burghers, who are richer, or, rather, much more economical, than the Polish nobles; several hundreds of square miles pass in this way every year from the Slavs to their Teutonic enemies; at the same time, the State is studying to erase from the map, as far as possible, all Polish names, and replace them with German names, which may or may not be translations of the Slavic.² The

¹ On Jan. 1, 1885, the railways of Russia, including Poland, Finland, and the Transcaspien region, had reached an aggregate length of 16,155 miles. Of these, 738 miles belong to the State. — *En.*

² Since the writing of the above, the Prussian Government has taken summary measures to expel from the country all Poles not subjects of Prussia. An edict to this effect was issued and carried out with great severity. More than 34,700 persons were banished, and many others, finding that their expulsion was certain, emigrated to the United States. The majority of all these were Russian subjects. No charge of conspiracy or disloyalty was made against the exiles, and even the poorest were not expelled as paupers. The Home Minister, when interpellated in the Prussian Diet (May 6, 1885) on the motive which dictated the arbitrary conduct of the Government, replied that the measure objected to was a state necessity, and that the Prussian Government could not tolerate the presence in Prussia of large numbers of Poles who were not Prussian subjects. A further interpellation on the question was brought forward in the German Parliament on December 1. Prince Bismarck peremptorily declined to discuss the interpellation before that body, as the administrative measure referred to had been taken in virtue of the Emperor's right, as King of Prussia, to protect the German element in his border provinces against the flood of persons of foreign nationality who were settling there, to its detriment. During the fifteen

Lithuanians, who are fast losing their nationality, dwell in East Prussia, on the very confines of Lithuanian Russia. Lastly, there are some tens of thousands of Czechs in Silesia, and 80,000 Wends on the frontiers of Saxony, adjoining the 50,000 other Wends that are still left in the latter kingdom; this small nation of 130,000 souls occupies the mountains of Lusatia; it was once mistress of a vast territory, but it is retreating before the advance of the German language, which pursues it into the humblest hamlet, which is penetrating it with its words and impregnating it with its syntax. About twelve thousand Walloons, a branch of the French nation, inhabit a district on the Belgian borders, south of Aix-la-Chapelle, around Malmedy.

Cities. — Prussia has twelve cities containing over 100,000 inhabitants.

Berlin (1,579,000) is growing rapidly, although it is built in a sterile plain, and surrounded by sands and pines; it lies on the sluggish river Spree, which carries the impurities of the city to the Havel, a long chaplet of lakes emptying into the Elbe. The "Centre of Intelligence," the "City of Victory," was founded on soil originally peopled by Slavs, and later it received into its bosom many French refugees who were expelled from their native land during the Dragonnade; there was a period, while Berlin was still a small city, when every third inhabitant was a Frenchman.¹

Hamburg (324,000), a "free port" 68 miles from the North Sea, has a population of 570,000, including Altona (143,000) and other suburban towns and boroughs. It is the second port on the continent, Antwerp alone outranking it. It unfurls the German flag over all seas, and ships multitudes of emigrants to America.

Breslau (335,000), formerly *Vratislavia*, an important manufacturing city, on the banks of the Oder, is the capital of Silesia, one of the old Slavic provinces that have been partially Germanized.

By uniting the adjacent manufacturing towns of Elberfeld and Barmen, we have a city of 242,000 inhabitants. It is traversed by the Wupper, an affluent of the Rhine.

Cologne (281,000), in German *Köln*, on the Rhine, which passes here in all its grandeur, was the first city of Germany in the Middle Ages.

Königsberg (162,000) lies on the Pregel, which is navigable for small vessels. Large vessels stop at Pillau Tief, the opening of the Frische Haff into the Baltic.

Frankfort on the Main (180,000) is famous for its banking transactions and speculations. The Rothschilds, the richest and certainly the most powerful family in the world, are natives of Frankfort.

Hanover (165,000; 193,000 with Linden) was the capital of one of the kingdoms swallowed up by Prussia. It is situated on the banks of the Leine, a river of the Weser basin, in a broad plain, which is prolonged in the vast *landes* of Lüneberg as far as the Elbe.

Bremen (126,000), next to Hamburg, has the most active commerce of all the German cities. It is a free city on the Weser; it sometimes sends as many emigrants to America as its rival, and sometimes even more, according to the years.

Dantzic (120,000), an archaic city, where certain streets and alleys are museums of the Middle Ages, is the *Gdansk* of the Poles, its old masters, who lost with it their

years previous to 1885, there had been a considerable increase of the Polish element in East Prussia and the adjoining districts of West Prussia. While the German element had increased from 1 to 5 per cent, the Polish had increased by from 8 to 11 per cent. — ED.

¹ The German geographer, Hermann Daniel, in his *Geography*, vol. iv., p. 155, says that there was a time when every tenth man in Berlin was a Frenchman. — ED.

route to the sea. It lies along a large arm of the Vistula, not far from its embouchure into the Baltic.

Magdeburg has only 114,000 inhabitants; but with its suburbs the number is swelled to 202,000. This city is situated on the Elbe, just below the mouth of the Saale, a charming stream, flowing from an idyllic valley of central Germany, past the two university towns of Jena and Halle.

Then follow Düsseldorf (145,000), on the Rhine; Stettin (106,000), on the lower Oder; Aix-la-Chapelle, in German *Aachen* (103,000), near Walloon or French Belgium, etc.

Saxony. — This is the most densely peopled state of Europe; and the number of its inhabitants has nearly doubled in less than fifty years. In 1834 the population was 1,596,000; in 1890, over 3½ million¹ men were crowded on the less than 5800 square miles of its territory, or 604 persons to the square mile. Belgium itself, almost double in area, it is true, has only 536 inhabitants to the square mile. If we take up the two countries in detail, the Walloon-Flemish kingdom has the advantage—Flanders, Hainault, Brabant, and the provinces of Liège and Antwerp are more thickly populated than Saxony is; and, unfortunately for both kingdoms, they owe these disproportionate multitudes to the activity of devouring industries and trade. Saxony is backed against the Erzgebirge, which separates it from Bohemia. It is traversed by the Elbe. In the south are chill mountains; in the north, hills and plains. In the gorges of Bautzen, Saxony still shelters fifty thousand Wends. All the rest of its inhabitants, who are German in speech, are of Teutonic and Slavic blood mixed in unknown proportions; but the names of localities prove beyond dispute that the country belonged in olden times to Slavonian tribes, of which the Wends constitute the melancholy remnant. Saxony, also, so far as the so-called independent kingdom is concerned, is only a fragment of the region once occupied by the Saxons, who were, perhaps, the greatest of all the German peoples, the one which did most toward the perfecting of the literary idiom, and the one whose name is now borne throughout the world by the more or less German or Germanized nations.

There are three Saxon cities containing more than 100,000 souls each.

Dresden (276,000), the capital of the kingdom, on the Elbe, possesses so many paintings and works of art that it has received the title of the "German Florence."

Leipsic (294,000), one of the great centres of the book trade, rises in the vast plain on the Elster, an affluent of the Saale.

Chemnitz (110,000; 140,000 with the suburbs), on a tributary of the Mulde, is the Manchester of Saxony.

Grand-Duchy of Baden. — The Grand-Duchy of Baden has a population of 1,657,000, on 5820 square miles, or 285 persons for every 640 acres. It resembles Alsace, which faces it from across the Rhine. Like Alsace, it has a broad, fruitful plain, ravishing valleys, and gorges whose clear torrents descend, past grain-mills and saw-mills, from the tops of fir-crowned eminences. Only, in Baden these eminences are called the Black Forest; and in Alsace the Vosges.

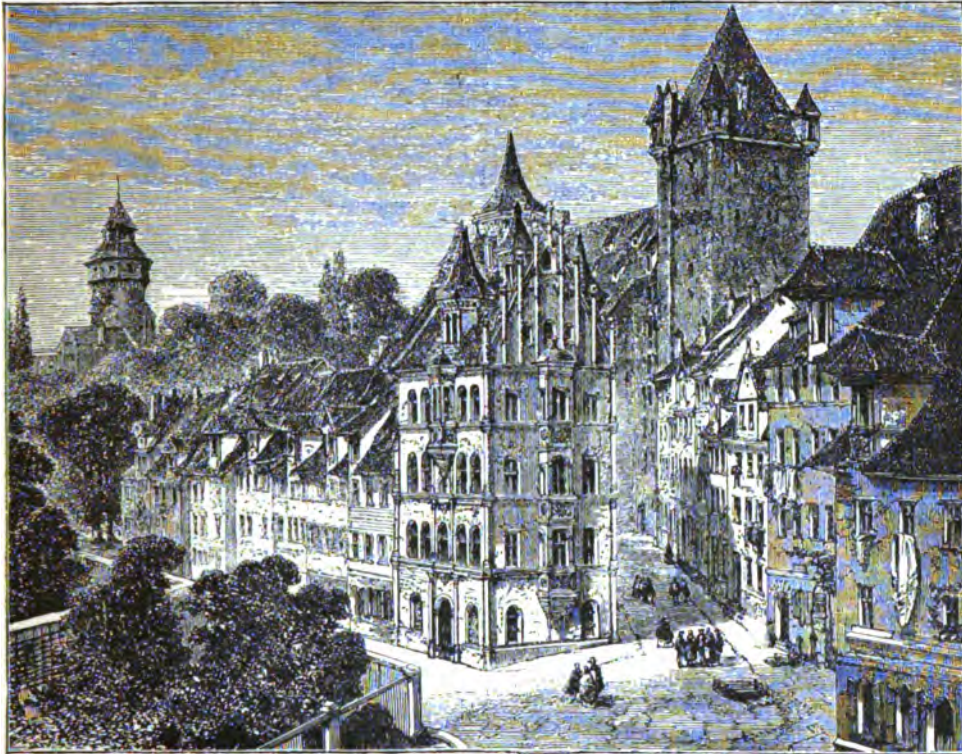
In spite of its insignificant size, the Grand-Duchy of Baden has a varied surface. It rears the culminating summit of the Black Forest (Feldberg, 4902 feet); it possesses the most charmingly wild defiles of this wooded chain; and, again, though much of the land slopes toward the Rhine, on the eastern declivity of its forests there is a species of *Tras-os-Montes*, where the Danube has its source. There, at an elevation

¹ Exactly 3,500,513.

of 2221 feet, two torrents from the fir-forests, the Brege and Brigach, meet, near Donaueschingen, in a swampy plain, which was once a lake. They form a river which takes the name of Donau at the point where it comes in contact with a small rivulet flowing from the park of Donaueschingen Castle. A little farther on, near Tuttlingen, it loses a part of its waters; these are absorbed by the fissures, and again gush forth, to be carried down to the Lake of Constance as the river Aach.

The capital, Carlsruhe (pop. 73,500), is outranked by Mannheim (79,000), situated at the confluence of the Rhine and the Neckar. Heidelberg (pop. 32,000), famous for its university, occupies an enchanting site on the banks of the Neckar.

Wurtemberg: Swabia. — Wurtemberg numbers 2,035,000 inhabitants, on 7530



PANIERSPATZ — NUREMBERG.

square miles, or 270 persons to the square mile. It covers a portion of old Swabia (*Schwaben*), a delightful land, where dwelt in former times the Schwabs, or Schwobs, a people jeered at in old saws and derided in tales; but no other German tribe has given as many great men to the country. Under this name of Schwab, who would not recognize the Suevi of the very early Middle Ages? These German adventurers hacked their share out of the remains of the Roman Empire, along with Alans, Goths, and Vandals. They hewed and carved in Gaul and then in Iberia, where, toward the end of the sixth century, they disappeared in the dregs out of which were formed two powerful nations, the Spaniards and the Portuguese.

From early times, for a thousand years perhaps, this small Swabian country has

been dispersing countless settlers far and wide, even in Caucasia, Palestine, and Guiana. It has turned its soil to account in a marvellous fashion, and no other European state has relatively as much land under cultivation, if we include under this head the perfectly kept forests. Its capital is Stuttgart (pop. 140,000), a charming city, about 2½ miles from the Neckar.

The surface of Württemberg is divided into three physical regions, the Mountains, the Hills, and the Plateau. The Neckar, which is the central river of the kingdom, and its beautiful affluent, the Enz, rise in the fir-forests of the Mountains, in the bosom of the ancient *Hercynia Sylva* (Black Forest), which, though now much diminished in area, comprised in former times the east of France and the west of Germany; thence the two streams flow away to meet below Stuttgart, in the Hills, among mediocre vineyards, in a moderate climate.

The Plateau is, in a measure, isolated from the other two physical regions. Neither in its nature nor in its history does High Swabia — such is its name — form one organic body with Low Swabia. The latter belongs to the Neckar, and consequently to the Rhine; the former is in the Danubian basin. From Protestant Low Swabia we climb to Catholic High Swabia up rugged escarpments; whether we set out from Stuttgart, or from Tübingen, the celebrated university city of Württemberg, or from any other town of the middle Neckar, we reach the Plateau by notches in the soft rock of the Rauhe Alp, which prolongs the Jura chain beyond the Rhine and the Danube; in these notches, which are sometimes superb, burghs perched high up on the crags watch the flow of beautiful, limpid torrents that have their sources in great reservoirs, such as abound in Jurassic rock. On the highest terrace of the gorges we find a vast, mammillated plateau, which stretches away to join the Bavarian tableland, and slopes toward the Danube; at Ulm (pop. 36,000), the stream that is destined to become the mighty Danube is still no larger than the Neckar.

Hohenzollern. — Württemberg partially encloses the principality of Hohenzollern, which is a dependency of Prussia. Hohenzollern is watered by the Danube in its extreme upper course, and by the Neckar above Tübingen. From a manor of this land sprang those country squires who were to become, after centuries of intrigue and careful management, the kings of Prussia and the emperors of Germany.

The Swabian kingdom has likewise produced an imperial house, that of Hohenstaufen, which took birth in a castle on a bald eminence overlooking the railroad from Stuttgart to Ulm.

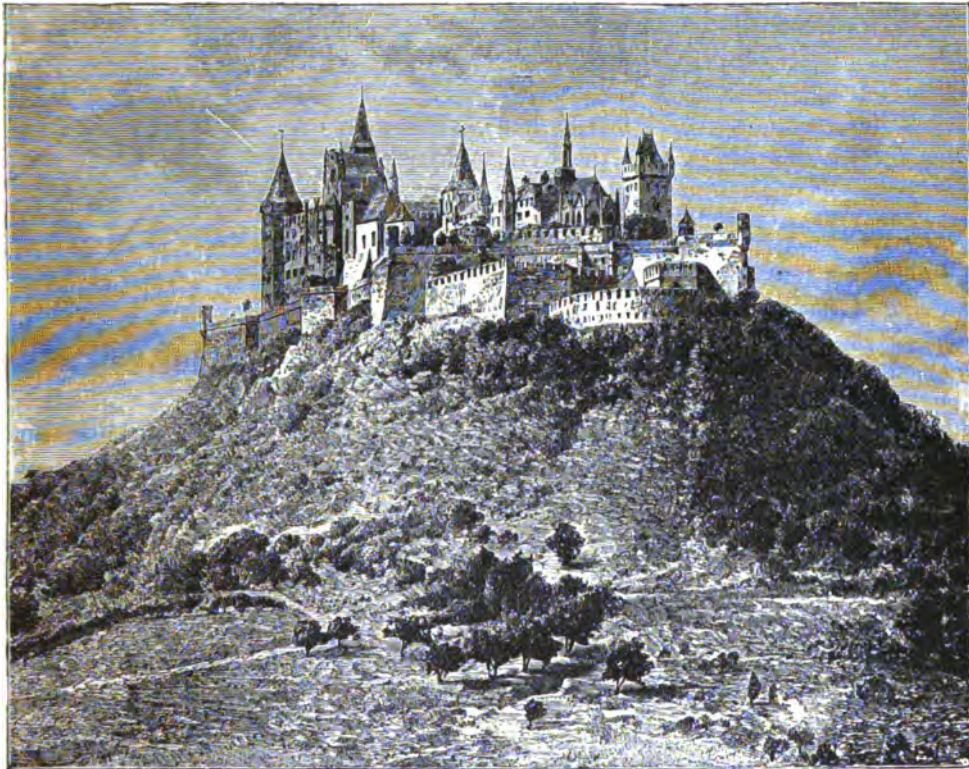
As for the third great German family, that of the Hapsburg rulers of the Austro-Hungarian Empire, it originated in a donjon of Teutonic Switzerland, near the roaring Aar.

Bavaria: The Bavarian Plateau, Franconia. — This German state, the largest after Prussia, supports 191 inhabitants to the square mile, or 5,589,000 persons on 29,290 square miles. Seventy-one hundredths of the Bavarians profess the Catholic religion; they are even very devout, and therefore do not love the Prussians, who to them are the representatives of Protestantism; a certain antipathy exists between the two peoples, and, of all the German subjects, the Bavarians bend least readily to the hegemony of the north; if they dared, they would kick against the pricks. The Bavarians are a partly dark race, especially in the south, and they certainly have Celtic as well as Slavic blood in their veins; before the year 1000 they spoke Ladin in their Alps: Ladin, a brother of the Romansch dialects which are still used in the Grisons, is a Neo-Latin idiom which has not completely disappeared from the Tyrol.

Bavaria comprises a few slopes of the Alps and the high Danubian plain ; Franconia or the Main region ; and the Palatinate, on the left bank of the Rhine.

The Danubian plain or Bavarian Plateau is the loftiest of the great German plains, and its 1591 feet of mean elevation give it the second rank among the tablelands of Europe, that of Castile and Estremadura alone surpassing it. Interspersed with its fertile soil, which is benumbed during six months of the year by the cold of these altitudes, are moors and swamps of large extent, called *Moose* ; these tracts are not always healthful.

When Bavaria receives the Danube from Swabia it is a medium-sized river ; she transmits it to Austria a current worthy of the title of a powerful stream, after having



HOHENZOLLERN CASTLE.

poured into it the Lech, the Isar, and the Inn. This last river is larger than the Donau itself at their confluence on the very confines of the Bavarian territory. The Lech, Isar, and Inn carry in their floods the tribute of several beautiful lakes : the Ammersee, 804 feet deep ; the Würmsee, encircled by woods and villas ; Chiemsee, having an area of 74 square miles and a depth of 459 feet ; Königssee, or King's Lake, magnificently set in the mountain, and having a depth of 626 feet. The Bavarian Danube bathes but one large city, Ratisbon or Regensburg (pop. 38,000).

As for the Franconian Main, this incredibly tortuous river has a length of 375 miles, while the distance in a direct line from its source to its mouth does not exceed 150 miles. It flows by Würzburg (pop. 61,000), passes through a beautiful notch

between the Spessart and Odenwald, bathes Frankfort, and empties into the Rhine at Mainz, or Mayence (pop. 73,000).

The capital of the Bavarian kingdom is Munich (pop. 348,000), in German *München*, situated at an altitude of 1929 feet, in a barren, gravelly plain, in view of the Bavarian Alps, on the banks of the swift-rolling, green Isar; its imposing edifices, its galleries, its collections of art, have won for it among the Germans the name of the "German Athens."

Nuremberg (pop. 142,000), on the Pegnitz, an affluent of the Main, is still more archaic than Dantzic; no other large German town has better preserved in their completeness the elaborately built houses, sculptured windows, little well-like squares, winding alleys, *culs-de-sac*, and all the sinuous, tangled labyrinth of the mediæval era. In those days the saying ran: "The cannon of Strasburg, the wit of Nuremberg, the strength of Venice, the magnificence of Augsburg, and the gold of Ulm sway the world." And also: "At Nuremberg, the humblest burgher is better lodged than the King of Scotland."

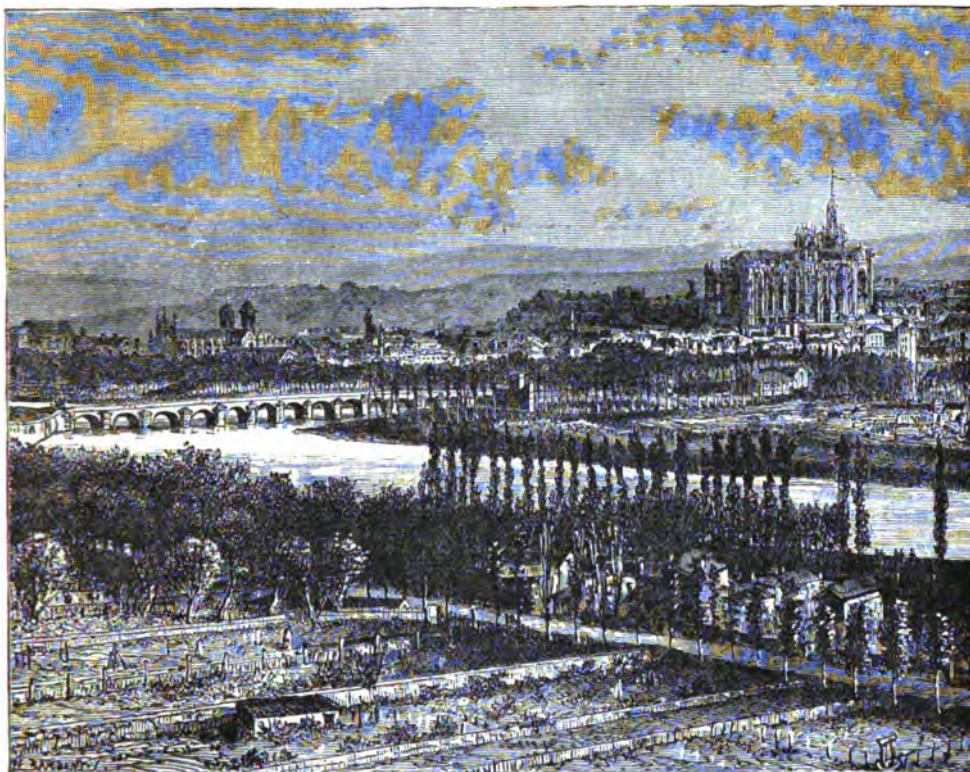
Alsace-Lorraine. — Alsace and Lorraine, which were French previous to the war of 1870, have been subject to the German Empire since their annexation in 1871. France has been weakened, and Germany has become more sinewy and more restless. The imperial province of Alsace-Lorraine comprises a favored district fronting the Rhine. Back from the river stretches a fruitful plain; in the rear of the plain rises the black, forest-clad chain of the Vosges;¹ and behind the Vosges lie the valleys of the Saar and the Moselle, with Metz, which has at last been violated. The province is more densely peopled than Germany, and much more so than France. It supports 1,604,000 inhabitants, on 5600 square miles, or 286 persons to the square mile. The French-speaking portion of the population, which is to be found in certain high valleys of Alsace and in sections of Lorraine along the Seille and the Moselle, comprises only a fifth of the total number of inhabitants. Nevertheless, when the hour of separation rang, the German-speaking Alsacians were the best Frenchmen of France. They are so still.

• Strasburg (pop. 124,000), 3 miles from the Rhine, groups its old and new edifices about a vast cathedral having a spire 466 feet in height. The city lies on the Ill, a lowland river which drinks several torrents from the Vosges.

Mülhausen (pop. 77,000) is one of the busiest manufacturing cities of Europe, and one of those where the working-man is least oppressed.

Metz (pop. 60,000) borders the Moselle at its confluence with the Seille.

¹ The culminating dome of the Vosges, the Ballon de Guebwiller, or Ballon de Soultz (4678 feet), is in Alsace.



GENERAL VIEW OF METZ.

AUSTRIA-HUNGARY.

Austria-Hungary embraces 241,000 square miles ¹ of territory, and has a mean elevation of 1700 feet. The population numbers 41,171,000, or 171 inhabitants to the square mile. These figures do not include Bosnia-Herzegovina, which is attached at the same time to Turkey and to the "dual empire."

The Danube. — The Danube, a tributary of the Black Sea, is the great bond of the Austro-Hungarian Empire. This is the second stream of Europe in length (1750 miles), and it far outranks all the other European rivers in volume. It rises in the Black Forest, in the Grand-Duchy of Baden, passes from there into Würtemberg, thence into Bavaria, and enters Austria at an altitude of 896 feet. At this point it is already a powerful and magnificent current. Below Linz, between Grein and Krems, the scenery of the Donau fairly rivals that of the Rhine; but poetry has celebrated less its rocks and gilded less its legends. Craggs strangle the stream, — on the right the Alps, on the left the Bohemian Forest; at the Strudel the waters break in falls; at the Wirbel they once whirled in an eddy, which was more dangerous than the Strudel itself, but the obstruction has been removed, and this maelstrom of the Danube has disappeared. After its deliverance from these long gorges, the Donau

¹ Exactly 240,942 square miles, of which Austria includes 115,903, and Hungary 125,039. — Ed.

passes Vienna. It receives through the Morava, or March, the waters of Moravia; then, at Pozsony, or Presburg, it penetrates into the upper Hungarian plain, called the Little Plain, in distinction from the larger, low plain. There the waters are dispersed in a net-work of "small Danubes," forming a great number of islands, among which the Great Schütt and the Little Schütt are the largest. The former, comprising 600 square miles, terminates at Komárom, or Comorn, at the mouth of the Vág, or Waag, a river from the Carpathians. Then the plain contracts, the stream welcomes back all his prodigal sons, and below Esztergom (Gran) enters the defile of Visegrád, at the terminus of which is outspread the Great Hungarian Plain. The Danube bathes the capital of Transleithania (Hungary), as it has that of Cisleithania (Austria proper), separating Pesth from Buda—these are the two parts of Budapest. It embraces the long island of Csepel, and then drinks the waters of three large rivers, the Drave, the Save, and the Tisza.

The Drave has its sources in the limestone Alps, as does also the Save, which rolls an average of 38,550 cubic feet per second, and 20,125 at ordinary low water. The Tisza, the central river of Hungary, has a mean flow of 60,000, with 16,000 at low water, and 140,000 in the highest floods. The Drave, the Save, and the Tisza convert the Danube into a current of 280,000 to 350,000 cubic feet per second.

It is this stream, unrivalled in Europe, and worthy to rank with the Asiatic and American rivers,—though more "glorious" than they, because it has drunk more blood, and because more tears have been shed on its banks,—it is this stream, carrying twice as much water as the Rhine and the Rhone combined, that flows out of Austria-Hungary through a rocky pass not more than 425,450, or 500 feet broad in places, but having a depth at times of 100, 130, or even 165 feet. This last cut, which is more than 60 miles long, is called the pass of the Iron Gate. The name Iron Gate is applied especially to a succession of rapids over a screen of porphyry, quartz, and schist,—all hard rocks, which are with difficulty eroded by the Danube, although the current is extraordinarily swift at this spot. The Danube carries here, on an average, 361,000 cubic feet per second. During the freshets it is impossible for the entire body of water to force its way through the defile, and the stream sets back for a long distance into the Hungarian plain, driving the Servian Morava, the Temes, the Save, the Bega, and the Tisza up-stream for long distances, the last sometimes fully 95 miles. At such periods, the level surface of Hungary becomes again in part what it was as a whole before the Iron Gate was cut through the mountains, namely, a vast lake; and when the waters recede, the lake gives place to swamps.

With the exception of the Adriatic seaboard, with the exception of Bohemia, which belongs to the Elbe basin, of Austrian Silesia, which slopes toward the Vistula, and of Galicia, which is inclined toward the Vistula and toward the Dniester, all Austria is Danubian.

Alpine Regions.—Austria claims its full share of the Alps. In the Orteler, Oetzthal, Stubay, and Hohe Tauern groups, the massive glaciers, lofty cataracts, fresh meadows, and charming lakes make the Tyrol and the Salzburg region a Switzerland, which, perhaps, even surpasses Helvetia in beauty. In the Oetzthal and Stubay Alps there are 309 glaciers. Oetzthal alone is plated with 222 square miles of ice, and the entire Tyrol contains 490 square miles. It is here that the loftiest mountains of the empire rear their heads, Gross Glockner reaching 12,451 feet, and the Orteler Spitz 12,218.

In the mountains of Lower Austria, which are included between the Enns and

the famous Semmering Pass, there are no elevations of 6500 feet. In the limestone Alps (where the Germans are gradually giving place to Slavs) lofty summits are rare. Karavanka, between the Drave and the Save, rises in magnificent limestone crests, of a pale reddish hue; but its proudest peak stands modestly, at an altitude of 7480 feet. Three-pointed Triglav, surrounded by the sources of the Save, is more than 9350 feet high. It supports the most eastern snows of the Alps, and the most imposing panorama of Austria is said to be unfolded from its summit.

The Karst. — South of the Save, and extending as far as the cornice of the sterile slopes which press close upon the Adriatic, stretches the plateau of the Karst. This barren, forbidding tract is 1650 feet in altitude; it is covered with a red soil, and abounds in limestone crags and masses. Nowhere in the world can we find so much naked rock, so many jagged crests, or so many swallow-holes in which large rivers disappear. The entire plateau is perforated with caverns, through whose shades speed, in leaden floods or in deafening cataracts, torrents which rise to the surface near the sea in magnificent springs. The Timavo, a river 165 feet broad, which empties into the Adriatic not far from Trieste after a course of $2\frac{1}{2}$ miles, derives the crystal waters of its three fountains from the lakes hidden beneath the Karst. These waters are those of the Rieka,¹ a torrent which rushes noisily into a rift in the rock. The Timavo once had a much greater volume than it has now; in those days it rose to the light in seven, nine, or even a dozen jets; it was the "source," the "mother," of the Adriatic. "Through nine mouths," says Vergil, "'mid the rocks' responsive roar, the sea comes bursting up, and deluges the fields with its thundering billows." If the mighty stream has dwindled to a small river (when the change was wrought, no one knows), it is because, at present, it carries only the waters of the Rieka, while formerly it probably prolonged the Sontius, a much larger current, now called the Isonzo: to-day the Sontius flows into the Adriatic after having made its way through the gorges of the mountains of Gradisca, but it is supposed to have terminated in ancient times in a lake with no outlet, and this lake, it is thought, communicated with the hidden reservoirs of the Timavo, through the underground channels of the Karst. However this may have been, the "source" of the Adriatic sometimes sinks now to a flow of 14 cubic feet per second; its mean is about 30, and its maximum 100. Another fountain, the Rieka of Fiume, yields nearly 800 cubic feet (?) of water per second; and, on the other side of the mountains, the transparent Poik issues from the capacious vaults.

In its subterranean course, the Poik laves the recesses of the marvellous grotto named by the Germans the cave of Adelsberg; then it rises to the surface under a different name, and again it returns to the gloomy shades of the Karst, which are dimly lit here and there by spectral gleams; finally it appears once more in the fountains of the Laybach, a navigable affluent of the Save. The Save drinks so many sparkling springs, either directly or through its tributaries, that it rolls at low water a mightier flood than many a highly celebrated stream. Among the magnificent jets which it receives from the Karst are the Ruinitza, the Kulasha, the Globornitsa, the Bistrats, the Tunjitsa, the fountain of Poporeselo, etc. We shall some day be able to explore a part of the subterranean world stretching from all these lost torrents of the plateau to all these springs at the base of the mountains, if a project which has been proposed is carried out; the plan is to enlarge and blow up the vault of the caverns wherever the depressed rock strangles the buried river during the rainy sea-

¹ This word, common to all the Slavic dialects, signifies river.

sons, and sets the floods back into the valley above. The peasants know, by long experience, how to connect these down-stream reservoirs with the up-stream swallow-holes to which they correspond.

Dalmatia.—The Karst is connected on the south-east with the naked rocks of Dalmatia, a province likewise famous for its superb reservoirs; the submarine fountain of Cattaro, and the Cettina, Kerka, Giadro, and Ombla rivers spring from such sources. The Cettina flows from a deep chasm, at the base of a limestone wall, in which a famous grotto opens. The Kerka issues suddenly from the rock, in the vicinity of Knin; at one point in its course of 22 miles the slope is broken and the stream descends 130 feet in 16 leaps, between bare rocks or garlands of foliage, over stone draperies which the waters themselves are daily weaving by their calcareous deposits. The Giadro enters the Gulf of Spalato after a course of not more than half a league. The Ombla is but little over a mile long; its source is to be sought in the Trebenstitsa, a torrent which disappears on the plateaus of Herzegovina. It is near Ragusa that the Ombla begins and ends;—this name Ragusa, given to the town by the Italians, is delusive. Who would recognize under this Neo-Latin term the Dubrovnik which was long the beacon light of the Slavs of the south?

From the Dalmatian mountains the eye sweeps the Adriatic, whose resplendent fiords remind one of a Norway where dates would ripen, a Norway with no glaciers, but glowing with all the warmth and beauty of the Mediterranean. Dalmatia would be a superb land if it only had a little verdure, and if it were not for the Sirocco, which prevails in summer, and the fierce, piercing, racking Bora, which blows from the north-north-east during January and February.

It is claimed that the notorious barrenness of the Dalmatian slopes and of the Karst is traceable to the Venetians, who felled the forests of these mountains to build the ships of their navy. It was, moreover, among the Dalmatians that the Venetians obtained the crews for their vessels, and Austria does the same to-day. The fleet which defeated the Italian fleet at Lissa¹ was not manned by Germans, but by seamen from the Dalmatian coast, or rather from the Dalmatian islands,—from Veglia, Cherso, Arbe, and Pago, from Lunga, a long, slender strip of land prolonged by Incoronata, from Uglian and Pasman, from Brazza, which produces good wine, from Lesina, Lissa, Curzola, Lagosta, and Meleda; these islands, which glisten in a charming sea, within full view of the massive pile of rocks rising from the shore to the Dinaric Alps, are all destitute of trees, and are sometimes lashed by the Bora, sometimes by the Sirocco.

In the south, at the very extremity of the Dalmatian coast, a narrow channel conducts the waters of the Adriatic into the Gulf of Cattaro, which is one of the best sheltered harbors in the world; the rigid mountains and sharp rocks reflected in its waves belong to the Montenegrin princes,—those daring Slavic squires who have never yet been tamed.

Hungary and Transylvania.—**Alföld and Felföld.**—**Pusztas and Mezöseg.**—From the most eastern summit of the limestone Alps, the eye sweeps a vast plain through which the Duna and the Tisza flow between swampy banks; Duna is the Magyar name of the Danube, and Tisza that of the Theiss, a river having a catchment basin of over 58,000 square miles. This plain, of lower Hungary, is separated from upper Hungary by the defiles of Esztergom, which have been cut by the Danube between

¹ In 1866 the Italians, under Admiral Persano, made an attack on Lissa, but were badly defeated by the Austrian fleet, which was commanded by Tegetthoff. The battle was fought 10 miles north of the harbor. — Ed.



THE GULF OF CATTARO.

porphyritic and trachytic mountains on the one hand, and graceful wooded hill-slopes on the other; the plain of upper Hungary, called the "Garden of the Occident," embraces about 6000 square miles; that of lower Hungary comprises some 37,000. Lower Hungary is the Alföld of the Magyars, that is to say, the Lowlands, in opposition to Felföld or Highlands. It is estimated that the plains occupy 32 hundredths of the Magyar territory, the high plateaus and mountains 30 hundredths, and the hills 38 hundredths. The Hungarian lowlands stretch from the Danube to the first swells of the Carpathians and of the Transylvanian mountains; they are so level in places that an area of 4000 square miles is frequently submerged by the inundations of the Duna and Tisza.

The Tisza was once exceedingly tortuous, having a length of 775 miles in a distance of 335, measured in a direct line from its source in the Carpathians to its junction with the Danube. Its course has been shortened 290 miles by cutting off the curves; it has been closely diked, but the stream is only the more destructive for all these engineering efforts. It bursts through the dikes, or flows over them, and often threatens the towns along the bank with a tragic fate; Szeged, or Szegedin, for example, was nearly destroyed only a few years ago (1879); when the waters recede, they leave stagnant, reedy, gnat-infested pools, swamps covered with birds and filled with leeches, bogs, and *sarretz*, or wet, miry meadows. Back from the unhealthful banks, on the high ground which neither Tisza, nor Szamos, nor Körös, nor Maros ever reach, the aspect changes; here the plain is dotted at rare intervals with straggling villages as large as cities, rich harvests undulate in the fields, and, as far as the eye can reach, immense herds of oxen, with gigantic horns, can be seen peacefully feeding in the meadows.

Between the sinuous Tisza and the broad Danube, the channels of which run parallel for 200 or 250 miles, lies the Hungarian Mesopotamia, called in Magyar the Puszta, that is to say, the Steppes. This level Puszta, from 50 to 55 miles wide, with a circuit of more than 310, has mirages like Egypt, shifting sands like the French Landes, Saharan heat, Arctic cold, and desolating winds, that are sometimes torrid, sometimes glacial. Its trees are mere shrubs or bushes. There are no springs, and few running streams; the water is supplied from wells, the long sweeps of which form an occasional relief to the monotony of the Puszta landscape; the very rare currents of water are ungainly and turbid, and all merit the name of Sarviz (Muddy Water), which is borne by a river of the plain on the right bank of the Danube. Not a rock, not a stone; earth, earth everywhere: "In the Alföld," says the proverb, "they pave with mud." In the wet season, the mire constitutes the fifth element here, as in Poland, White Russia, and Lithuania. Fortunately, the rains are not heavy: the annual fall in the Hungarian lowlands is about 20 inches; in the vicinity of the Carpathians it is from 30 to 36, and the mean for all Hungary is from 24 to 25.

Notwithstanding the monotony of the scenery, the expansive view which can be had of the plain as far as the hemicycle of the Carpathians, and the symmetry of the natural meadows, entitle the Puszta to some claims to beauty. There, in the *csardas*, or low pise houses, are quite comfortably lodged half-nomad herdsmen called *czikos* (horse-herders), *gulyas* (cattle-herders), *juhász* (shepherds), and *kanász* (swine-herds). The *czikos* are the Gauchos of Europe; the *gulyas* lives in a pointed reed hut; the *juhász* guards his flock from the wolf, armed with a hatchet and accompanied by ferocious dogs; the *kanász* drives his grunting beasts into the oak forests. But systematic cultivation is rapidly taking possession of those grassy steppes where the hordes of

Hungarian conquerors found once more the vast level pasture-grounds of their Oriental *landes*.¹ The Alföld and the Puszta are the true home of the Magyar, — that ex-nomad who has become settled in spite of himself.

On the right of the Danube, in the direction of the Alps, the Hungarian plain rises more rapidly than it does on the left, on the route to the Carpathians. At the base of the Forest of Bakony (2319 feet) lies Lake Balaton (245 sq. m.), a shallow sheet, which is prolonged here and there by marshes; between these same mountains and Vienna is the Fertő, called by the Germans Neusiedler See; the area of the latter lake varies between 12 or 15 square miles and 150, according to the height of



SHEPHERDS OF THE TATRA MOUNTAINS.

the Danube, of the Leitha, and of the Raab; this unattractive pool has no right to the title of lake, which always involves some idea of beauty. On the north and east of the Hungarian plain, the Carpathians and the Transylvanian mountains rise in terraces. The Carpathians stretch in a semi-circle of 900 miles, from the Danube

¹ The Magyars appeared in Europe about the year 884. It is supposed that they were of Turanian stock, and were descendants of the ancient Scythians. They probably made their way from the Ural Mountains across to the Volga, and thence westward. It was about 889 that they crossed the Carpathians. At that time they were divided into seven tribes, all under the leadership of Álmos, and all bound by a compact which insured equality and justice to all. Upon the death of Álmos, the chiefs chose his son Árpád to succeed him. The Magyars then completed the conquest of all Hungary and Transylvania. — ED.

to the Danube; from Presburg, where the Hungarian plain begins, to the Iron Gate, where it terminates. They cover 34,750 square miles. The Tatras, their culminating peak (8685 feet), are a mass of extraordinarily wild gneiss and granite, towering almost into the region of persistent snows, but the slopes are too rigid to retain any great masses of ice; half-way to the summit, 112 small lakes¹ pour their green waters into the Dunajec, a tributary of the Vistula, and into the Danubian Vág, one of the two rivers of Komárom.

The Northern Carpathians rise between Hungary and Galicia; the Southern or the Transylvanian Mountains support the "Woodland" — for such is the signification of *Erdély*, the Magyar name of Transylvania; the Latin name is almost a literal translation of the Hungarian.

If the Transylvanian plateau, embracing an area of 23,000 to 27,000 square miles, with a mean elevation of about 1500 feet, did not comprise so many barren, unattractive plains, this *Mezőség*, or Middle Land, would be a Switzerland in the Orient; in Transylvania, as in Helvetia, the plateaus and valleys, and the forests haunted by bears, lynxes, and wolves, are shared by three peoples; these three peoples, Roumanians, Hungarians, and Germans, are all in a way governed by the Jew, who is inn-keeper, grocer, money-lender, and universal broker, and who is seizing the land after the peasants are forced to abandon it; Transylvania overlooks, on the south, the Wallachian plain and the distant Danube, as the Swiss Acropolis gazes down on the Lombard plain and the far-off valley of the Po. The loftiest Transylvanian peaks, Negoi (8343 feet), Bucsesd (8192 feet), and Retyczat (8143 feet), nearly reach the altitude of the Tatra group.

Galicia and Bukovina. — All the Alpine regions, except Istria and Dalmatia, all Hungary and Transylvania, belong to the basin of the Danube. Outside of this basin, the Austro-Hungarian Empire absorbs two countries which look toward different horizons, namely, Galicia and Bohemia.

Galicia is the more eccentric of these two sections; for, though it is Austrian by the games of intrigue and of chance, it is Russian by its location, climate, and all its physical features, as well as by the two languages of the inhabitants. Setting out from either of the two Austro-Hungarian capitals, Vienna or Budapest, we reach Galicia only by long and difficult routes. Bohemia, on the contrary, is, as it were, woven into that part of the empire which gravitates about Vienna, and the Danube skirts for a long distance the spurs of the Bohemian Forest, which can be easily traversed. A road but a few leagues in length leads from the great stream to the banks of the Vltava, the central river of Bohemia.

Galicia contains over 6½ million souls (6,578,000) on its 30,307 square miles, or 217 to the square mile, — a density of population hardly warranted by the harsh climate. But this Polish-Ruthenian country possesses an arable soil, savory pasturage, superb forests, extensive mines of rock-salt, and rich petroleum-springs. That portion of the Carpathians which separates it from Hungary is chiefly of sandstone formation; the waters from their deep forests flow to the Vistula, and to three rivers which are Galician by their sources and by their upper affluents, namely, the San and the Bug, both tributaries of the Vistula, and the tortuous Dniester. In the north, on the Vistula and the San, the people speak Polish; in the south, on the Bug and

¹ The curious mountain lakes which occur in the deep hollows between the peaks of the Carpathians are called "eyes of the sea." The number of these assigned by most authorities to the Tatra group does not exceed 40. — Ed.

the Dniester, they speak Ruthenian or Malo-Russian, and the disputes carried on in both tongues are between Slavic brothers.

The cities and towns are thronged with Jews, to the number of fully 700,000, a tenth of all this vigorous, trafficking race. Three contiguous countries, Galicia, Poland, and Malo-Russia have become by the hazards of time the principal places of refuge for the Twelve Tribes; Ephraim and Judah are represented there along with thousands and thousands of Israelites who are not descendants of the shepherd of Ur of the Chaldees, but who profess obedience to the law of Moses, and who are hastening, like their brothers in the faith, the accomplishment of the prophecy made to Abraham, "Thy seed shall be more in number than the sand which is upon the sea-shore." They are increasing formidably; they are getting a firm grasp on the land, commerce, and manufactures: "Everything through us and for us," may well be their cry, and the cities of Galicia are already and will be henceforth Jewish as much as Polish and Ruthenian. The Jews speak German as a general thing, and, before the anti-Semitic outbreaks, they were glorified, from the Rhine to the Niemen, as noble pioneers of the *Deutschthum*.

Bukovina is a prolongation of Galicia on the south; but it belongs wholly to the Danube basin, and of the two nations inhabiting it, only one, the Ruthenian, in the north, has a common origin with the Galician Slavs; the Roumanians, in the south, are closely related to the Neo-Latin people of Moldavia-Wallachia. Bukovina supports not more than 647,000 inhabitants on its 4035 square miles. It occupies the upper basin of the Sereth and the Pruth, and despatches all its waters to the Danube; these waters flow from the forests, which cover nearly a half¹ of the province. The beech is the predominant tree here.

Bohemia and Moravia.—Bohemia, lying in the centre of Europe, rests chiefly on gneiss and granite. These are chill rocks, but the country is so well protected from the winds, on all sides, that the climate is almost mild, in spite of the altitude and the remoteness of the sea. The population numbers 5,838,000, on a little over 20,060 square miles. The southern extremity of the province nearly touches the Danube, while in the south-east it joins Moravia by gently undulating plateaus, which slope toward the Hungarian Danube. Both Bohemia and Moravia are Slavic countries, although something over a third of the Bohemian population, and something less than a third of the Moravian, are German.

The Bohemian basin is wholly shut in, except for a small opening in the north. The Bohemian Forest separates it from Bavaria; the Erzgebirge, from Saxony; the Riesengebirge (Czech, *Krkonoše*), from Prussia. Through the northern gap, the Labe, the Elbe of the Germans, issues at an altitude of 367 feet; this defile, leading from Dresden to Prague, is the principal gate through which the Germans who are besieging Bohemia penetrate into the interior, to mix there with the indigenous Slavs.

The Elbe, like thousands of other rivers, takes its way at first toward horizons which it ere long turns from in scorn. The gorge, in the *massif* of the Giants, through which struggles the slender torrent that is to become Hamburg's stream, points at first due south; if it continued in this direction, its waters would gain the left bank of the Danube above Vienna; but a series of curves soon carries them west, then north, and they finally reach the Vltava; the latter, the Moldau of the Germans, ought to give its name to the stream, for it is 45 miles longer than the other

¹ Forty-seven hundredths.

current, drains double the area, and has a much greater volume; moreover, it passes Prague, in the heart of Bohemia.

In the conflict between the two great races that are disputing the possession of Bohemia and Moravia, victory seems to incline toward the Czechs;¹ these are Slavs who have wakened after a long and deep sleep; proud of their glorious history, of their vigorous, severely sweet language, they have already nearly Czechized Prague, where five-sevenths of the 183,000 inhabitants are of Slavonic race; they are increasing perceptibly in certain manufacturing towns, where but recently the population was wholly German, and in the majority of the circles of the country, rural as well as urban. Even in America the Czechs do not abandon their nationality. About 150,000 Bohemian and Moravian emigrants have settled in the United States; they publish nearly a score of newspapers there in their own idiom; but these sheets will probably be short-lived, and the Czechs of America will disappear as rapidly as those who bury themselves in Russia.

Out of every 100 inhabitants in Bohemia, 63 are Czechs, and 37 Germans; out of every 100 in Moravia, less than 30 are Germans, and more than 70 Czechs. These are the proportions shown by the census of 1880. In Bohemia the Slavs number 3,470,000, against 2,054,000 Germans; in Moravia, 1,507,000, against 629,000 Germans, making a total of 4,977,000 Czechs; add to these the 126,000 Czechs of Austrian Silesia, those of Lower Austria, and lastly the Slovacks of Hungary, who are pure Czechs except for some slight differences in dialect, and we have very nearly 7 million individuals for the entire Czech-speaking race.

Hostile Nations.—The 41 million Austrians are divided into bitterly hostile nations and subnations. Of these, one inclines toward Germany, another toward Roumania, and several toward Russia; while the most unfortunate of all, the Magyar, with no brothers or kindred near, floats in vacancy, at the risk of destruction. In round numbers, the "dual empire" contains (1889) 18 million Slavs, 10 million Germans, more than 6 million Magyars, more than 2½ million Roumanians, and nearly 700,000 Italians and Ladins, etc.

Germans.—The Germans of Austria, the founders of the empire which has gradually become centred about Vienna, are wholly German in speech, but not in lineage; though Teutonic blood predominates in their veins, they nevertheless reckon among their forefathers a large number of Celts and many Slavs, even in the Tyrol and the arch-duchy of Austria, the most "loyal" sections. And we make no account here of the ancestry of that part of the people which is of unknown stock, and of which the 20,000 Tyrolese of Ladin idiom are the only apparent remains.

In Cisleithania, or Austria proper, the Germans constitute almost the entire population of Upper Austria and Lower Austria, of the northern Tyrol and of Salzburg. They comprise more than two-thirds of the inhabitants in Carinthia, nearly two-thirds in Styria, more than one-third in Bohemia, something less than a third in Moravia, and nearly a half in Silesia. There are 325,000 in Galicia, and over 100,000 in Bukovina; but in this last province they are much scattered, and are almost lost among the Slavs and Roumanians. They have no hope of a future in Bukovina, in spite of the growth of the German-speaking Jews.

In Transleithania, or Hungary, the 2 million Germans are of little importance. In the north, they are disappearing more and more surely in the mass of Slovacks; in

¹ The name of Czechs is usually reserved for the Bohemians, while the Slavs of Moravia are called Moravians. The differences in dialect between Bohemia and Moravia are very slight. — Ed.

the centre, they are rapidly blending with the predominant race, and are becoming Hungarian, even in name; this is true of Budapest itself, where they, however, number 120,000; yet in the south, in the inexhaustibly fertile district of Banat, they hold out well, and are even denationalizing to a certain extent the Serbs and Roumanians. In Transylvania, they form a small nation, of about 200,000 souls. Until recently, they have retained certain privileges here which long guaranteed their existence among the Roumanians and Hungarians. Their safety is endangered now by the prolificness of the Roumanians and their own sterility. They are called Saxons, although their ancestors came chiefly from Flanders and the region between the lower Meuse and the lower Moselle.

Slavs. — We must discriminate between the Northern Slavs and the Yugo-Slavs, or Southern Slavs. These two divisions of the race are separated by a zone of Germans, Magyars, and Hungarians. But for the broad belt of heterogeneous peoples extending from Bavaria to the Black Sea, the Czechs would touch the Slovenes, the Slovacks and Ruthenians would border on the Croats and Serbs, and the Malo-Russians on the Bulgarians.

The Northern Slavs comprise:—

1. The Czechs, divided into Czechs proper, Moravians, and Slovacks, embracing in all 7 million men, who inhabit Bohemia, the western part of Austrian Silesia, Moravia, and various *comitats* of north-western Hungary. Their language, which is split into different dialects, closely resembles the Polish. Of all the Slavs, these are the most detested by the "Pangermanists," because they possess Bohemia, the *Keil in Deutschlands Fleische*. They separate the wholly German country of Bavaria from Silesia, which is gradually Teutonizing, and they extend almost to the gates of Vienna. They boast of their Slavism; they turn their eyes toward Moscow rather than toward Vienna; and they do not fear to display their hatred of Berlin.

2. The Poles (3,250,000), in the north of Galicia and in the eastern part of Austrian Silesia. Backed, as they are, against the Poles of Poland, the Galician and Silesian Poles seem destined to be reincorporated with the parent nation at some future day; but when, how, under what sceptre, or in what federation, who can tell?

3. The Ruthenians (3,150,000), in southern Galicia, northern Bukovina, and in those *comitats* of Hungary from which the Tisza, the Szamos, the Ung, and the Bodrog flow. They occupy, therefore, the double slope of the Carpathians. They are Malo-Russians in speech and United Greeks in religion, while the Poles are Catholics. They are resolutely defending their idiom in Galicia against these same Poles, who were once their masters.

Including the 7 million Czechs, the 3,250,000 Poles, and 3,150,000 Ruthenians, the Northern Slavs number between 13 and 14 millions.

The Southern Slavs, or Yugo-Slavs, comprise more than 4 million souls in Austria-Hungary, exclusive of Bosnia-Herzegovina and other countries of the Illyrian peninsula. Serbs of the Greek faith, Catholic Croats and Slovenes,—all speak essentially the same tongue, the Serbian, a neighbor of the Russian. They people certain districts of Styria, and of Carinthia, Carniola, Istria, Dalmatia, some portions of the Hungarian plain, Croatia, Slavonia, and the Military Frontier; Zagrab (Agram), near the Save, is the Rome toward which they turn their gaze. The Yugo-Slavs, after having been for long years trodden under foot, displaced, replaced, over-

ridden, and despised, by the Germans, have wakened to a consciousness of their own existence, and they are gradually freeing themselves from the Teutonic hegemony. It would be possible for these Slovenes, Croats, and Serbs, and the Bulgarians to unite in one grand confederation. Unfortunately, the Bulgarians do not speak the same language as the Serbs, Croats, and Slovenes; the Slovenes and Croats do not profess the same religion nor use the same alphabet as the Serbs and the Bulgarians. The latter employ the Russian letters or Cyrillic alphabet; the former, the Latin characters.

Magyars, or Hungarians. — The Magyars, to the number of more than 6 million, inhabit the great plain of Hungary, a part of the Mezöseg, and the Carpathians of Transylvania, in the extreme east of the country, above the Moldavian and Wallachian lowlands. It is in the gorges, on the flanks of these mountains, among peoples of widely different tongues, that they have best preserved their primitive idiom and customs. They are increasing by the absorption of Slovacks, Germans, Roumanians, and Serbs; but their own race is not prolific. They are for the most part dark-skinned, with long, black hair, big moustachios, and proud, fiery eyes.

The Magyars are related to the Finlanders and also to the Turks; a thousand years ago they crossed the Carpathians, and made a descent upon the Danubian plain; four centuries earlier, Attila, king of the Huns, had reared his wooden palace on the banks of the Tisza, and there, too, the Magyars pastured their strong-limbed horses, along the borders of the river, which then wound in countless curves and turns through the swamps made by its own overflow. They were long the scourge of Europe, and their horsemen pushed their razzias even to Embrun, on the Durance, not far from Marseilles. Converted to Christianity, they allied themselves with Germans, Slavs, and Roumanians, and in time the primitive ugliness of their race was in a measure modified; but they preserved their language, their Magyar pride, their contempt for foreigners, and their love for Hungary, — that “Paradise bounded by four rivers and three mountains.” *Extra Hungariam non est vita; aut, si est vita, non est ita*, was their Latin saying: the Hungarians, refusing to speak the seven dialects of their polyglot kingdom, had adopted Latin as the official medium of communication between the nations included within the “Realm of the Crown of Saint Stephen.”¹ Of the Germans, by whom they were once scorned, they had a saying in their own language, “*Eb a Nemet kutya nelkül*” — “Where there is a German, there is a dog!” Stifled to-day by the Slavs, they exclaim, “*Tot ember nem ember*” — “The Slavic man is not a man!” Neither the curved sabre of the Janissary, nor the inroads of German peasants into their fields, nor the seizure of the towns by a German-speaking bourgeoisie, nor the flow and ebb of the Slavs have ever shaken their constancy; after having seen the Turk ruling on the hill of Buda, above their beloved Alföld, and the German governing them *à la caporale*, by decrees, they are to-day masters in the eastern part of the empire. Their power will probably be short-lived, and the future is dark for them.

They have preserved from their nomadic past all that civilization will tolerate; as horsemen, they prefer the plain to the mountain, the country to the city, and a pastoral to an agricultural life. They are aristocratic, fond of pomp, feathers, furs, and spurred boots, fastidious about points of honor, patriotic, even ridiculously so, enthusiastic, and yet practical; they are said to be born to command. Their language is rich, complicated, and poetic; it has retained its mediæval forms; it is wholly unre-

¹ The totality of countries comprised in Hungary; as the crown of Saint Wenceslas designated those comprised in Bohemia.



AN ENCAMPMENT OF BOHEMIANS.

lated to German and to the Slavic and Roumanian dialects around it; it belongs to the so-called agglutinative idioms, and is distantly connected to Finnish, Esthonian, and Turkish. About 250 newspapers and reviews are published in the Hungarian tongue.

Neo-Latins.—About 2½ million Roumanians inhabit Transylvania, various Hungarian *comitats*, the south of Bukovina and the Banat of Temesvar. This rustic race is in no way distinct from the Roumanians of Moldavia-Wallachia and Bessarabia, with whom it forms a homogeneous body of 8 million men. The Roumanian language is a descendant of the Latin, but it possesses a great many Slavic roots, which the Roumanians are actively striving to replace with Latin.

About 670,000 Italians live on the southern slope of the Alps, along the Adige, in the southern Tyrol, from whence they are rapidly driving the Teuton; in the valley of the Isonzo, a picturesque stream which runs from the Triglav to the Gulf of Trieste; on the Istrian seaboard; and on the Dalmatian coast. In this last province, which Italy would gladly regain possession of, there are only 44,000 Italians, in a population of 472,000.

The 20,000 men of Ladin and Romansch stock, constituting the remnant of a people which, in ancient times, occupied a large part of the Tyrol and of eastern Switzerland, now possess only the extremities of certain gorges and small cirques in the mountain which the Germanic language has invaded.

So, then, we find in the Austro-Hungarian empire four races, speaking four different tongues: Slavs, Germans, Magyars, and Neo-Latins; also a fifth race, the Jews, who now rarely use their very ancient Hebrew; and from fifteen to twenty peoples and sub-peoples: Czechs, Moravians, Slovacks, Poles, Ruthenians, Roumanians, Italians, a few Ladin and Romansch communities, Jews, Armenians, Bohemians, etc. Of these various inhabitants more than 28 million are Catholics and United Greeks, 2½ million Eastern Greeks, 3½ million Protestants, and 1,650,000 Jews, etc. — Such is this mosaic empire, which, furthermore, is divided into two groups of provinces, between which there exists neither sympathy nor *entente cordiale*: namely, Cisleithania and Transleithania.

Cisleithania and Transleithania.—Before the war of 1866 the empire was divided into German provinces, which belonged to the Germanic Confederation, and non-German provinces. It comprises to-day Cisleithania, which embraces all the provinces above the Leitha, an insignificant affluent of the Danube, on the right bank, below Vienna; and Transleithania, below the mouth of the Leitha. The Cisleithanian States are called Austria; the Transleithanian, Hungary.

• **Cisleithania.**—Cisleithania embraces fourteen provinces, former *crown-lands*:—

Lower Austria, or Austria below the Enns,¹ on the Danube, a German province; Vienna is situated in this division.

Upper Austria, or Austria above the Enns, on the Danube, a German province.

Styria, called by the Germans *Steiermark*, on the Drave and its affluent the Mur, a province which is already more nearly German than Yugo-Slavic, and where the German element is gaining ground.

Carniola, whose Slavic name, *Krain*, adopted by the Germans, signifies “frontier”; this division, belonging partly to the Karst, on the upper Save, was formerly German, but has become Slovenian.

Istria, a peninsula embraced by two gulfs of the Adriatic, and belonging wholly to

¹ A small affluent of the Danube, on the right bank.

the Karst, except for a narrow strip of coast; it is Yugo-Slavic, with Italians along the shore.

Dalmatia, bathed by the Adriatic, a Yugo-Slavic province, with Italians on the seaboard and in the islands.

Carinthia, in German *Kärnten*, on the upper Drave, a division which is more German than Yugo-Slavic; the Yugo-Slavs are, however, gaining on the Germans.

Salzburg, a very beautiful Alpine country, in the basin of the Inn, a German province.

The Tyrol and Vorarlberg, on the Inn and Rhine in the north, and on the Adige in the south; this province is German in the north, Italian in the south, and Ladin in a few valleys.

Bohemia, on the Elbe, two-thirds Slavonic, the other third German; the Slavs are gaining here.

Moravia, on the Morava, a tributary of the Danube, more than two-thirds Slavic, the rest German; here the Germans are losing.

Austrian Silesia, on the upper Vistula and Oder, a German, Polish, and Czech division, where Slavism is again acquiring the ascendancy.

Galicia, on the Vistula, the San, the Pruth, and the Dniester, a Polish and Ruthenian country, with numerous Germanic and Jewish elements.

Bukovina, on the Dniester, the Sereth, and the Pruth, Ruthenian in the north, and Roumanian in the south; the Ruthenians are gaining.

These fourteen countries contain together 23,835,000 inhabitants, on 116,000 square miles, or 206 persons to the square mile.

Transleithania. — Transleithania, or Hungary, comprises three provinces: —

Hungary proper, on the Danube and the Tisza, inhabited by nearly all the different races of the empire, Magyars, Roumanians, Germans, Serbo-Croats, Slovacks, Ruthenians; and

Transylvania (in German, *Siebenbürgen*), in the Carpathians, on the Szamos and the Maros, affluents of the Tisza, and on the Olt, an affluent of the Danube. This country is first of all Roumanian, then Magyar, and lastly German.

Croatia-Slavonia, on the Drave and the Save, a wholly Yugo-Slavic province which has just annexed the Military Frontier, an equally Slavic region: the name "Military Frontier" is applied to a very long and narrow strip of land extending along the left bank of the Save, and the left bank of the Danube, facing Bosnia and Servia. When Serbia and Bosnia were subject to the Turks, twelve regiments of Frontiersmen, a sort of Austrian Cossacks, were stationed along this boundary to defend the Christian territory against the miscreants who terrorized Europe for three hundred years. Three of these twelve regiments, those of the Banat of Temesvar, came from Hungary; the other nine were from Croatia-Slavonia; the immense camp has been broken up, and the Frontiersmen are becoming ordinary peasants, on their fertile soil, the best part of which belongs to flat Sirmia.

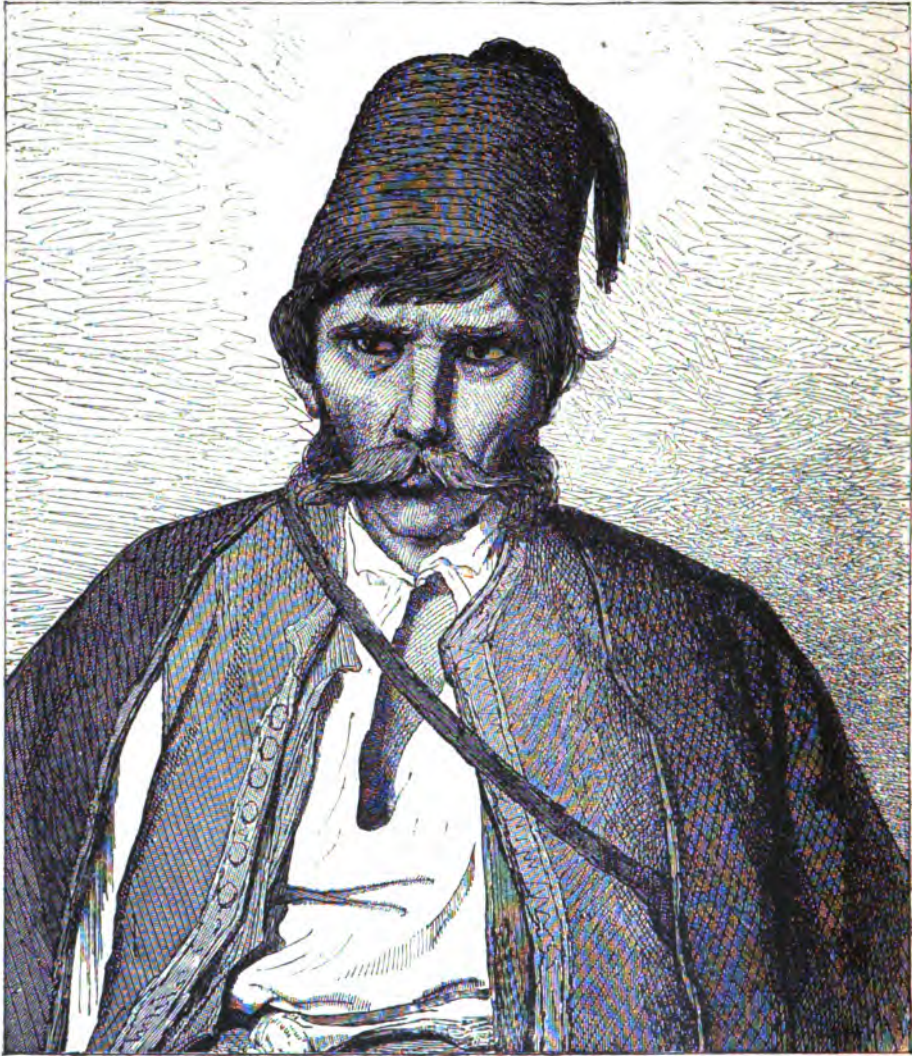
These two provinces, with Fiume, contain 17,336,000 inhabitants, on 125,000 square miles, or about 139 persons to the square mile.

Cities. — Six of the Austrian cities have a population of over 100,000 souls: —

Vienna (1,355,000), the capital of the empire, is a superb city peopled by fashionable, pleasure-loving Germans; it is situated at the foot of the easternmost Alpine hills, in sight of the Carpathians, at an altitude of 479 feet; it lies near the boundary line separating the Germans from the Slavs and Hungarians. The city is built on the

Danube, all the arms of which have been turned into one channel 2950 feet broad. Wien (its German name), or Becs (its Magyar name), may be considered as the great central city of Europe.

Budapest (494,000), whose importance dates from the present century, is the cap-



A COLONIST OF THE MILITARY FRONTIER.

ital of Hungary; it comprises two cities, Pesth, in the lowlands, on the left bank of the Danube, and Buda, or *Ofen*, on a lofty hill.

Prague (183,000), the *Praha* of the Czechs, the capital of Bohemia, on the brownish Vltava, is a magnificent town, almost unrivalled in the beauty of its situation and the grandeur of its old monuments.

Trieste has a population of 158,000, including suburbs; it is a port at the head of

the Adriatic, and lies at the base of the Karst; it is an Italian city, and inherits its character from Venice; it has no Slavic or German elements.

Lwow, the capital of Galicia, called likewise Lemberg and Leopold, contains 128,000 inhabitants, who are for the most part Poles; the climate is very severe, the range of temperature being from -25.6 to $+100.4$ F.; the town is remote from any great stream.

Then follow Grätz, Brünn, Szeged, Cracow, Szabadka, and Debreczen:—Grätz (113,000), the capital of Styria, on the Mur, a tributary of the Drave, bears a Slavic name, but German is spoken here as well as in the surrounding district;—Brünn (95,000), Czech *Brno*, the capital of Moravia, lies on an affluent of the Morava. At Szeged, the Morava encounters the Tisza, in a low plain which the inundations of the rivers convert into a miry sea; like nearly all the cities of the Hungarian plain, it is a huge, straggling, ungainly burg, a monstrous village composed largely of thatched cottages built along unpaved streets, which are mud in winter and flying dust in summer;—Cracow (76,000), on the upper Vistula, is dear to the Poles: it was the residence of the Polish kings down to the beginning of the present century; at that epoch the town contained 100,000 souls;—Szabadka (70,000), called by the Germans *Maria Theresienopol* (city of Maria Theresa), is between the Duna and the Tisza, in the Puszta. This village city spreads over about 350 square miles. Debreczen (51,000) is the national city of the Magyars; it covers 380 square miles of the sterile Steppe; Kecskemet occupies 340 square miles; Szeged, 270; Hodmező-Vásárhely, 230, as well as Török-Szent-Miklos, etc.

For **Bosnia-Herzegovina**, see page 214.

BELGIUM.

The Scheldt, the Meuse.—Belgium, with the same density of population as its neighbor, France, would contain not much over 2 million souls, but, peopled as it is (536 persons to the square mile), its inhabitants number 6,100,000, on 11,378 square miles. It is a bilingual country, and supports two dissimilar peoples: in the north, on the Scheldt, the Flemings, who are principally blonds, with blue, gray, or light eyes; in the south, on the Meuse, and in the Ardennes, the Walloons or French, who are for the most part dark.

The Scheldt, on entering Belgium from France, is a very small river, with an average width of 72 to 75 feet, and a flow of 256 cubic feet per second at low water, 425 at ordinary heights, and about 1400 in the floods. In Belgium, it apparently swells to a large stream, but its size is wholly dependent on the tide. Before Antwerp, which ranks among the first ports in the world, it has a width of 1150 to 2300 feet; it is nearly 4000 feet broad when it passes into Holland, where it divides into two arms, the West Scheldt or Hont, which empties into the North Sea at Flushing, and the East Scheldt, which communicates with the Meuse. The total course of the Scheldt is about 250 miles, and its basin embraces an area of 7680 square miles; the mean flow is estimated at 3250 cubic feet per second. The stream is about equally Belgian and French.

The Meuse (in Walloon, *Mouse*) is narrower than the turbid Scheldt, and does not

wind, like the latter, through unattractive lowlands. It enters Belgium from France, with a flow of 880 cubic feet per second at low water, 3500 at ordinary seasons, and nearly 25,000 in the greatest freshets; it passes out of Belgium into Holland after having received, in its charming valley, the Semoy, the Lesse, the Sambre, and the Ourthe; it bathes Namur and Liège.

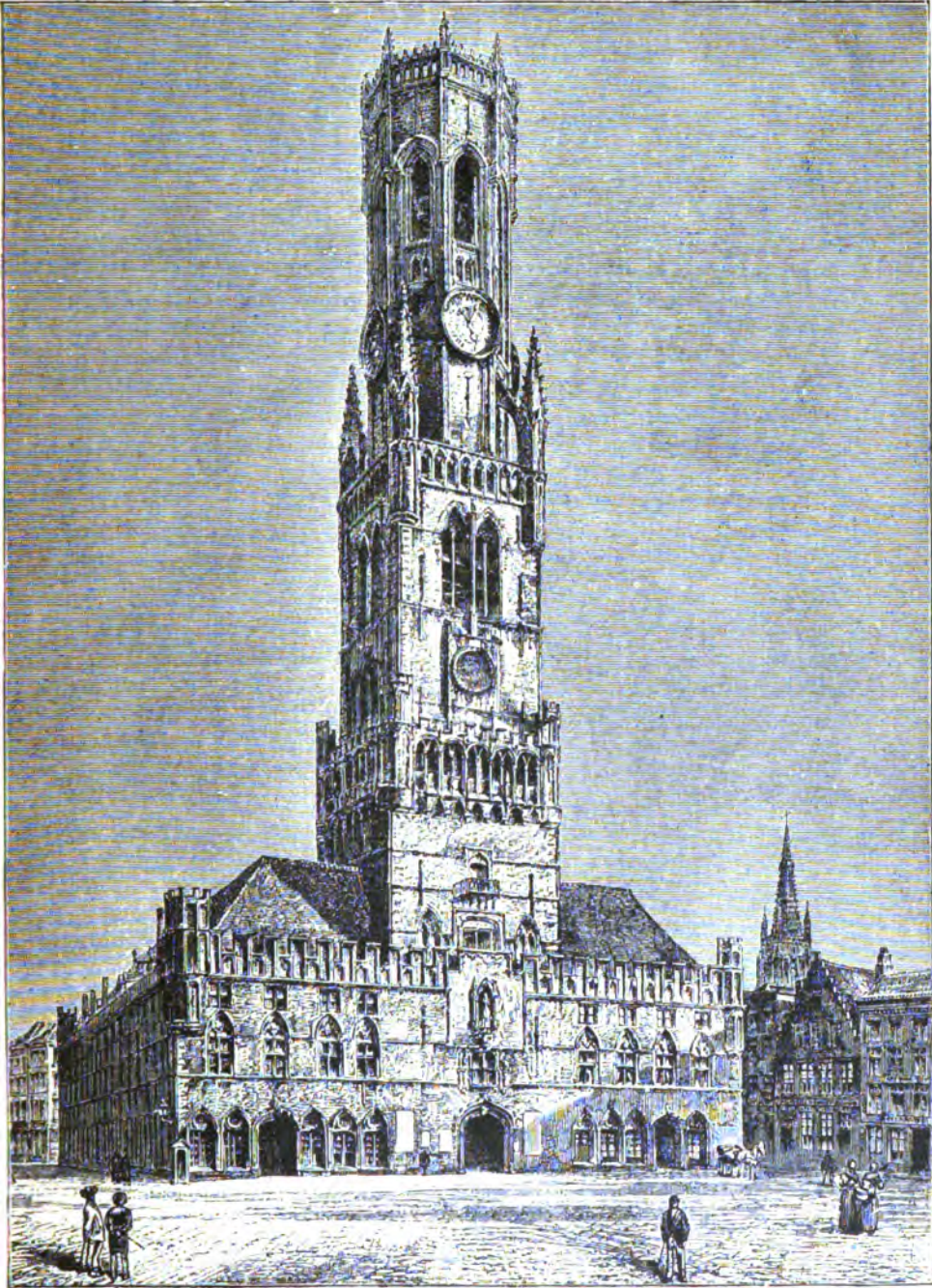
Flanders.— By drawing two lines from the bloody field of Waterloo, one in an easterly direction to the point where the Meuse quits the Belgian territory, between Liège and Maestricht, the other westward to the place where the Lys, an affluent of the Scheldt, enters Belgium, we divide the kingdom into Flanders and Wallonia.

Flanders nearly equals Wallonia in extent, and is much more densely peopled; it comprises West Flanders, East Flanders, the greater part of Brabant, Limbourg, and the province of Antwerp; it stretches from the sands of the North Sea, the delta of the Scheldt, and the Campine moors to the hills of Wallonia, and from the lowlands of France to those of Holland. The surface is very level, except on the Brabantine hills, but the Flemings till this ancient "pitiless forest"¹ in a marvellous fashion. Left to itself, the soil is sterile, and it is only by patient toil that it is forced to produce anything but woods, heaths, dune-grass, and fen-plants; it is for the most part sandy, and resembles to a certain extent the French Landes. In the east is an extensive dune district called the Campine; this tract comprises parts of the provinces of Antwerp, Limbourg, and Brabant, and is continued into Holland; it has an impervious subsoil of sand cemented together by the tannin from the heaths. But the Fleming is slowly dotting the Campine with oases; he has already succeeded in making Flanders fruitful, although it was originally covered with dunes and swamps, and was almost as valueless as the Campine itself; he has even transformed it into one of the chief agricultural countries of the world; and, what is to be deplored, he has made it one of the most crowded industrial centres of the globe. East Flanders has 822 inhabitants to the square mile; West Flanders, 590; Antwerp, 629—this density is due principally to the great city of the province;—as for the 873 persons to the square mile in Brabant, we must remember that this division contains the city of Brussels, which, with its eight suburbs, has a population of 477,000. In Flemish Belgium, the cities prolong their streets to other cities or enormous villages, these villages blend with still other cities, with burgs and hamlets and clusters of factories. And twenty, fifty, one hundred hamlets make a small "Manchester."

Fields cultivated like gardens; old cities proud of their *hôtels de ville*, their belfry towers, their churches, their splendid museums, and their colossal factories; smoking chimneys and brick villages; navigable canals, and draining trenches, with dunes along the shores,—such is Flemish Belgium. The clumsy, commonplace scenery is relieved by the trees, the verdure, and here and there enchanting sea-views. Nature is lavish with all her gifts, save the sunlight, social life is gay, and the rich live here in comfort; the poor drag out a hard existence under the cold fogs; their life is made up of excessive and destructive toil, vitiated air, no sunlight, little sleep, and bad food; it is varied with drunkenness, strikes, and shut-downs, all of which take the bread out of their mouths. The mortality rates are high, especially in the marshy districts; the Flemish provinces have 90 deaths for every 100 births, while the Walloon provinces have only 70.

Like the Dutch language, from which it scarcely differs, the Flemish is harsh,

¹ The name given by the Romans to the low plain of Flanders and Zealand.



THE BELFRY OF BRUGES.

unsonorous, and devoid of brilliancy; but it is full, vigorous, plastic and poetic, and abounds in songs, sayings, and proverbs.

Wallonia. — The surface of Wallonia, which is more rolling than that of Flanders, exhibits some genuine plains; its *Hautes-Fagnes*, or miry plateaus, and its hills and mountains, which are connected with the French Ardennes, raise the mean altitude of Belgium to 535 feet; the aridity of the Belgian Ardennes, their *landes*, swamps, and sombre, chill woods, form a striking contrast to the flatness of Flanders, a few leagues distant. These eminences are low; their culminating summit, near the famous watering-place of Spa, has an altitude of only 2261 feet; it barely rises above the surrounding regions. But the valleys are beautiful: the Meuse, the excessively winding Semoy, the picturesque Ourthe, the Amblève and Vesdre falling in cataracts between the rocks of the *Hautes-Fagnes*, the Lesse, which wanders for hours in the obscurity of the cavern of Han, — all these rivers are charming, and at times they are grand.

Wallonia embraces four provinces, namely, Hainault, Namur, Liège, and Luxembourg; it includes, besides, the southern third of Brabant. The manufacturing element, which predominates so largely in Flanders, gives place here to the agricultural, and the towns are smaller and less numerous on the average; shops are less common, except in the coal basins, and the population is less crowded than in the Flemish districts. Luxembourg, a high, rugged, rocky region, having a harsh climate, has only 128 inhabitants to the square mile, the province of Namur 240, but Liège has 680, and Hainault 737; the density of population in these last provinces is due to the masses of coal, iron, and metals buried in their hills. If Flanders is a Manchester of the continent, Mons and Charleroi are its Newcastles, and Liège its Birmingham.

Walloons and Flemings. — The Flemish Belgians are nothing else than Dutch, or Low Germans; the Walloon Belgians are French; they speak the French language in all its purity in the cities, and use French dialects in the country districts. Outside of Wallonia, Brussels, which was once exclusively Flemish, is to-day fully half French, and throughout the whole of Flanders this Neo-Latin idiom is the language of the wealthy and educated classes, of the newspapers and reviews, and of public life. It is in the Flemish cities that nearly all the 430,000 individuals who understand both French and Flemish¹ are to be sought.

Aside from the bilinguals and the 15,000 trilinguals, who add German to the other two idioms, Belgium contains about 2,500,000 Walloons, something less than 2,900,000 Flemings, and 42,000 Germans. The Walloons and the Flemings bear each other little love, notwithstanding the memories of a common history and the bond of their common Catholic religion. In Flanders, there has grown up a young literature, enthusiastic for the extirpation from Flemish soil of all that is in any way related to the French language; but, in spite of this revival of the Flemishizing spirit, the proportion of the languages is slowly changing in favor of the French: the Walloon provinces are more prolific, and the hundreds of thousands of Flemings who travel back and forth between France and Belgium learn more or less French in the great manufacturing cities of northern France.

Four of the Belgian cities have more than 100,000 inhabitants: —

Brussels (175,000; 477,000 with the suburbs), the capital of the bilingual kingdom, is a brilliant, fashionable city, situated on a river of the Scheldt basin, called the Senne.

Antwerp (221,000; in Flemish, *Antwerpen*), on the Scheldt, has a harbor second to

¹ Like all their French brothers, the Walloons rarely know any but their mother-tongue.

none on the European continent, not even to those of Marseilles and Hamburg. It was more populous, perhaps, four hundred years ago than it is to-day; it was then the most important of the manufacturing towns.

Ghent (152,000), a manufacturing city, at the confluence of the Lys with the Scheldt, occupies 26 islets, which are joined by a hundred bridges.

Liège (146,000), at the junction of the Meuse and Ourthe, has extensive iron foundries and factories, and metal works.

Then follow several cities whose power has waned, such as are to be found in all countries of a long and glorious history: Bruges (47,000; in Flemish, *Brugge*), eight miles from the North Sea, no longer has large manufactories, and no longer receives ships of heavy burden, for time, aided by nature, has modified the contour of the coast; Malines (50,000; in Flemish, *Mechelen*) is an archiepiscopal see, and Louvain (39,500; in Flemish, *Leuven*) is a university city.

HOLLAND.

The Zuyder Zee.—Holland, though much less densely peopled than Belgium, contains, nevertheless, 357 persons to the square mile: the population at the close of 1889 was rated at 4,550,000, on 12,742 square miles.¹ We call this region the Low Countries, which is an exact translation of *Nederlanden*, the name given to their father-land by the Dutch themselves. Holland, the name of the most important province, the one in which Amsterdam and Rotterdam are situated, has little by little come to be the designation of the whole kingdom, including Friesland, which is, or which was formerly, a distinct district.

Where we see to-day the breakwater formed by the elongated islands of Texel, Vlieland, Terschelling, and Ameland, and, south of these islands, the vast gulf of the Zuyder Zee, there was in ancient times a tract of solid land extending from what we call Holland to what we call Friesland; south of this land was a lake, *Lacus Flevus*, which was formed by the overflow of the surplus waters of the streams into the low plains. In 1170, the sea, by a mighty effort, broke through the levee which protected the lake; in the following century, it cut through the alluvia and the dunes, and triumphantly joined the sheet of fresh water which became the Zuyder Zee; that is to say, the South Sea. If we can believe the tales of the old historians, some of the inroads of the waves were terrible; one of them destroyed 40,000 individuals, another 80,000, still another 100,000, and all swallowed up vast plains, which the Dutch are to-day striving to recover from the waters.

Alluvial Holland, the Mouths of the Rhine.—East, south, and west of this slightly saline Zuyder Zee, which embraces at least 1930 square miles, stretch the amphibious lands of Holland; these alluvial and sandy tracts are traversed in the east by weak streams, and in the south by the *Rhijn*, or Rhine, and the Maas, or Meuse.

The Rhine, broad, and running between low banks, is scarcely on Dutch territory before it bifurcates. The left division, called the Waal, carries with it nearly seven-tenths of the waters, and joins the Meuse, which is not more than a tenth its own

¹ The area in 1880, according to official statistics.—ED.

size, and which mingles its arms with those of the delta of the Scheldt; the right division, called at first the *Neder Rhijn*, or Lower Rhine, and afterward the Lek, sends off on its right the only Rhenish branch which retains the glorious name of the offspring of the Alps, namely, the *Kromme Rhijn*, or Crooked Rhine, called farther on *Oude Rhijn*, or Old Rhine; this small branch of the noble stream passes two old cities of great renown, Utrecht and Leyden, and then empties into the sea with a mean flow of 141 cubic feet per second; while, under the false title of Meuse, the Atlantic receives from the "Nile of the Occident" 35,000 cubic feet per second at low water, 70,000 at ordinary seasons, and 350,000 in the greatest floods.



HIGH FENS, NEAR DORDRECHT.

The Rhine-Meuse-Scheldt delta, the islands of Zealand, the shores of the Zuyder Zee, and the Frisian coast as far as the German frontier, would be almost wholly submerged at high tide if the Dutch had not constructed dikes along the sea, which are a masterpiece of man's determination. The polders, that is, the flat lands drained by the canals (*gracht*), are becoming fruitful fields and green meadows behind these levees. By nature, the Holland seaboard is a marsh disputed by the fresh water and the salt; but the Dutch, who are gaining, on an average, 7 acres per day on the ocean, have willed that it shall be a garden; it is, however, always in danger of being engulfed, for the sea averages one great irruption in every seven years; since the year 1200, the billows have devoured about 2300 square miles, or not far from a fifth of the Netherlands; but the Dutchman has also reseeded over 1500, and when he has

drained off the Zuyder Zee, filled in the Shallows between Friesland and the littoral islands, and conquered from the waters no one knows how many swamps, great and small, he will have reclaimed more territory than the ocean has submerged. Some of the old marsh-bottoms look like checkerboards lined off by the canals; these canals vary in width from the ditch that a child can leap to the broad water-ways where ships can float. And not only does the prudent Netherlander part the waters, he also distributes the airs of heaven; on all sides swing the sails of wooden wind-mills, some grinding out flour, some pouring water into the canals.

The roads, which are the best in the world, are made of "klinkers," or bricks, which echo the roll of the coach-wheels. They are bordered with grass, and shaded by elms, oaks, beeches, willows, and lindens. They run through antique cities which have been enriched by centuries of commerce, navigation, fisheries, and manufactures, — cities of historic renown, which will retain the beauty of their great age until the day when the surveyor's line delivers over their monuments, alleys, and squares to the demolisher's pick. The villages are numerous and gay, the farm-houses shine with neatness, and the gardens have a profusion of flowers; for is not the phlegmatic Dutchman famous for the ardor with which he cultivates his tulips, his hyacinths, and his jonquils?

The Holland plains display the greatest opulence in Zealand, South Holland, North Holland, and Friesland. Under the misty skies of the two Hollands and of Friesland, the wet soil is adorned with the freshest of the meadows, which occupy nearly 5400 square miles in the Netherlands, or more than two-fifths of the kingdom.

Sandy and Peaty Holland: The High Fens and the "Dalgronden." — In the south, in the districts which continue the Belgian Campine, and in the east, in the provinces bordering on Germany; that is, in the south of Dutch Brabant, in Dutch Limburg, in Gelderland, Overijssel, Drenthe, Friesland, and Groningen, there is no such density of population as exists in the vicinity of the Rhine, the Meuse, and the Zuyder Zee. About 6800 square miles of soil (more than a half of all Holland) is occupied by the fens, and the sand and gravel tracts. Drenthe, therefore, has only 128 persons to the square mile, Overijssel 230, Brabant 260, Gelderland 263, and Friesland 263; while in the province of Utrecht there are 416, in North Holland 735, and in South Holland 821 inhabitants to the square mile.

The fens are subdivided into low fens, high fens, marsh fens, and the "dalgronden," or "reclaimed high fens." The time has passed when the lapwing and the water-hen alone animate the high fens. These bogs lie chiefly along the German frontier; they border Hanover, which has its full share of the most extensive, namely, the Bourtanger Morass. Through toils requiring the exercise of as much precision and perseverance as was demanded for the construction of the sea-dikes themselves, the high fens have been largely "disfenned"; that is, they have been stripped of the peat. As many as 10,000 people inhabit some of these reclaimed fens. Formerly, the peat was burned, making a slow, heavy, loathsome fire; and then grain was sowed in the ashes. To-day, the work is done in a better way; the peat is carefully removed to the very last particle, then canals are constructed to carry off the standing water, and the soil which underlay the murky waters and black mould of the bog is improved.

The high fens are prolonged here and there by sterile fields and moors, from which Dutch patience evokes harvests, and where the area of waste land is steadily decreasing. The surface of the tilled ground is being imperceptibly raised from year

to year by the heath sods which are used in the stables, and are afterward spread over the fields for fertilizing purposes. Villages, forests, Scotch pines, maenhirs and dolmens of red granite relieve the monotony, but not the melancholy, of these Hollandish moors. The turbulent rivers which flow here are gayer, freer, and more natural than the artificial coastal streams imprisoned between dikes in the regular network of the polders.

The Dutch; Their Language. — The Dutch are heavy, and laggard in action; but their unceasing strife with the growling waves and trembling fens makes them tenacious, self-possessed, prudent, thoughtful, and methodical. In the seventeenth century this very small people ruled the seas. They founded New York, and controlled the coast of what is now the United States; they were likewise lord and master on the dazzling shore which is to-day the Beira mar of Brazil. When the English deprived them of the empire of the waves, the Dutch fell back on their deltas; and there they stolidly drain their marshes, pump out their lakes, and make their moors habitable.

The Dutch language is a Low German idiom which has been ennobled by great writers; it is expressive and rich. Outside of Europe it is spoken by 40,000 Europeans and some thousands of natives in Java and other islands of the Dutch East Indies; by negroes and whites in a part of the Antilles; in Dutch Guiana and in a portion of British Guiana; lastly, in southern Africa, by the 300,000 to 350,000 Boers of the Cape, of Natal, Western Griqualand, the Orange Free State, and the Transvaal; beside these Boers, at least an equal number of Kafirs, Hottentots, and Bastards use the Dutch dialect of southern Africa, which, at least in the mouths of these copper-colored people, is not the literary Dutch. Had it not been for the seizure of the Cape by the English at the beginning of the present century, this language, with the half of a continent before it, would have become one of the great tongues of the planet. It is possible that even English will be unable to gain the supremacy over Dutch on the plateaus of South Africa, where the Boers have roused to a full comprehension of their strength. Flemish, which is almost identical with Dutch, is the speech of 3 million men in the north of Belgium, and in Dunkirk and Hazebrouck, in France.

Nearly a fourth of the Frisians have preserved their ancient *Platt-Deutsch*, which no permanent work has ranked among languages destined to survive. Everybody in Friesland speaks Dutch, and the Frisian tongue is disappearing.

More than 2,600,000 Dutch profess Protestantism, and fully 1½ million Catholicism; there are 85,000 Jews.

Cities. — Holland contains three cities with a population of over 100,000 souls.

The Hague (German, *Haag*; Dutch, *'s Gravenhage*, "the count's hedge, grove, or wood") has a population of 156,500. Dunes stretch between the sea and this attractive but silent and lifeless city, in whose parliament the interests of the most beautiful islands in the world are discussed.

Amsterdam (406,000), the "city of millionnaires," was the chief port of the world in 1650, when the commerce of Holland was five times that of England; and it retained this distinction until a hundred years later, when the traffic of the two nations was evenly balanced. A ship canal runs from the North Sea to this first of all Dutch ports, this chief city of the Netherlands, this unhealthy town set in the mud 18 feet below the crest of the highest tides. A hundred miry canals divide the city into 90 islands, which are connected by 300 bridges, and its 25,000 to 30,000

houses are supported on piles that extend down to the sand-stratum through 50 to 60 feet of peat and mud. Amsterdam has ceased to fear Haarlem Lake, which has been converted into a polder, in spite of its 25,000 million cubic feet of water, — a forecast of the fate which awaits the Zuyder Zee itself, when it shall be pumped behind a massive dike which will separate from the ocean 175,000 million cubic feet of water; not the entire 1930 square miles of the sea, but the southern portion, south of a line extending from Enkhuizen to the island of Urk, and thence to Kampen on the Yssel. In this way 750 square miles of land will be reclaimed from the sea.

Rotterdam (203,500), on an arm of the Rhine-Meuse, is a great commercial city; it ships emigrants to America.

Then follow Utrecht (85,000), on the Old Rhine, the seat of the Dutch parliament before the Hague was made the capital; Groningen (55,000), a maze of canals,



AMSTERDAM : VIEW ON THE CANAL.

in the north-east of the country; Arnhem (50,000), on the Lek; Leyden (46,000), on the Old Rhine, the ancient Lyons of the Batavi¹ (*Lugdunum Batavorum*), contains the most important of the four universities of the kingdom, etc.

Luxemburg. — From 1815 to 1866, the grand-duchy of Luxemburg (1000 sq. m.; pop. 211,000) was included in the Germanic Confederation, while at the same time it belonged to Holland, — just as Schleswig-Holstein was dependent both on the German Diet and the king of Denmark, and in the same way that vast territories were at once German and Austrian. This clumsy organization has been broken up, and Luxemburg forms at present a dependency of Holland, but administers its own affairs at will. It is included between Prussia, Belgian Luxembourg, and

¹ At the time of the Roman conquest of Gaul, the island which Caesar describes as formed by the Meuse after it has "received a branch of the Rhine called the Waal" (*Insula Batavorum*) was occupied by the Batavi, a valliant, vigorous people belonging to the Germanic tribe of the Chatti. — Ed.

France, and is peopled by families speaking a harsh Dutch dialect and professing the Catholic faith. These inhabitants are vigorous, but coarse, and fond of drink; they are frugal, and content with little; they emigrate to all quarters of the world. It is chiefly from Luxemburg that those legions of Paris sweeps come, of rough mien and filthy attire, who can be seen every morning at daybreak gathering up the city's refuse. French is the official language of Luxemburg, a heritage of the time when the grand-duchy formed a part of the Catholic Low Countries. As the latter was mostly Walloon territory, the government adopted the French idiom. — The capital, Luxemburg (pop. 18,000), overlooks from a high rock the Alzette, a river of the Moselle basin.

SWITZERLAND.

The Swiss Alps. — If we set out from Venice and ascend the valley of the Po, and then that of the Ticino; if from the Black Sea we follow the Danube, then the Inn; if we mount along the Rhine from Holland, or the Rhone from Provence, we reach in any case high mountains, verdant cirques, deep lakes, and wild gorges through which rush whitening torrents that have their birth in the snows or leap tumultuously out of an arch of blue ice. These mountains are called the Alps, this country is named Switzerland, the ancient *Helvetia*; it lies at the centre of the true Europe, surrounded by France, Italy, and Germany, and at the source of a river which flows away to be lost in the Slavic and Roumanian Orient.

On the Italian frontier, Monte Rosa (15,217 feet) and Mont Cervin, or the Matterhorn (14,715 feet), overlook the other summits of Switzerland. In the Oberland¹ and the Grisons, a number of horns surpass 13,000 feet; such as the Finster-Aarhorn, or the "sombre horn of the Aar," the Aletschhorn, the Jungfrau, the Mönch, Bernina, etc.

Switzerland does not rear the culminating rock of the Alps, since Mont Blanc (15,781 feet) rises in Savoy; neither has it, as is generally believed, the principal glaciers of the globe. It probably supports nearly five hundred of these ice-fields, which together cover about 710 square miles, two forty-fifths the entire surface of the country; and among these glaciers some are superb, from their cradle in the snow-masses to the bluish arch out of which leaps the savage offspring of the ice, the cold, turbid, violent torrent which bounds at once in cataracts down the stone stairway of the old moraines. Impeded on the mountain-slopes by rocky dikes and spurs, the glaciers are sometimes encumbered with massive blocks, sometimes glossy and bare, or simply powdered over with snow; here they offer a slippery support to the foot of the mountaineer, there they are seamed and broken, bristling with projections and needles, and riddled with chasms, out of which rises the indistinct murmur of the subglacial waters hurrying toward the terminal arch; almost always they are wedged between high rocks; sometimes it is a forest, a meadow, or even a carpet of flowers that borders the banks of these ponderous streams with glassy, compact waves. But, however

¹ This German word means Highlands; it designates here the "sublime" mountain-masses of the canton of Berne and of the Valais, between the parent branches of the Aar and the upper valley of the Rhone.

beautiful the Swiss glaciers may be, none can compete in magnitude with the glaciers of the Himalayas, or of Greenland and other polar regions; not even the Aletsch glacier, the most vast in Switzerland; and yet, from the base of the Jungfrau to the source of the Massa, a tributary of the Rhone, the Aletsch *mer de glace* is 15 miles long, from 5000 to 6000 feet broad, and covers more than 49 square miles.

These glaciers are in no sense fixed; there was a period when, twenty or a hundred times larger than they are to-day, they descended as far as Lyons, Grenoble, or Valence; hollowing out depressions beneath by their weight, polishing and streaking



THE JUNGFRAU.

their walls, they roughly modelled valleys ¹ which are now adorned with trees and beautiful meadows; they carried with them rocks which are dispersed far and wide in

¹ Dr. Albert Heim, of the University of Zurich, has recently published a valuable treatise on glaciers and glacier-theories (*Handbuch der Gletscherkunde*), in which he remarks that, "owing to the keen interest in the phenomena of the glacial period, the influence of glaciers has evidently been overestimated by many geologists, especially by those who have turned their attention to the subject of glaciers of the past, without sufficiently studying those of the present." As regards the erosive power of ice in the formation of valleys, after a most searching comparison of the eroding effects of water and ice, Dr. Heim says: "It is not maintained that certain results not effected by streams are impossible to a glacier, but that among all the valley-forming agencies glaciers necessarily play a very subordinate part as compared with flowing water; so that glaciation is equivalent to relative cessation of valley-formation." And, again, "The characteristic glacier-action which we can actually observe is not such as materially modifies valleys. Glaciers do not stamp on mountain or valley their actual form; they merely smooth, and very slightly wear, the rough surface of that which previously existed." — Ed.

clusters of erratic blocks; then came a period when the glaciers dwindled to an extraordinary degree; in these days they advance and retreat alternately, in accordance with laws that are but imperfectly understood, and during periods the exact duration of which is unknown; at the point where the young man slipped on the crystal ice, he stumbles, as an old man, over the stones of the terminal moraine, for the glacier has retreated several hundred yards or even several thousand. We seem now to be nearing the end of one of these eras of diminution.

The Alps embrace nearly 100,000 square miles; Switzerland, with its 15,964 square miles, would, then, possess a sixth of the "Acropolis of the Occident" if all the west of its territory, from Schaffhausen to Geneva, did not belong to another chain; this chain, the Juras, is composed of limestone walls which overlook from a distance, or near at hand, the broad valley of the Aar, Bienne Lake, and the lakes of Neuchâtel and of Geneva. Mont Tendre (5522 feet), between Lake Lemman and the source of the Doubs, is the loftiest summit of the Helvetic Juras. If it were 134 feet higher, it would equal the Crêt de la Neige, the culminating peak of the French Juras. The Alps are twice, almost thrice, the height of the Juras. When we compare Switzerland's two reliefs from any one of the many hills rising midway between them, a still greater difference of altitude seems to exist between the Alpine peaks, crests, and horns and the long and monotonous ridge of the Juras. However, as the latter chain supports vast plateaus, it does not lower to a very great degree the mean altitude of Switzerland, which is 4265 feet, or almost double that of Iberia (2300 feet), which ranks second among the countries of Europe in elevation.

The Inn, Rhine, Rhone, Ticino. — Mount Saint Gothard, rising between the canton of the Grisons (the route to Austria), the canton of Uri (the route to Germany), the canton of Valais (the road to France), and the canton of Ticino (the road to Italy), is a lofty *château d'eau*; from its crest the Rhine speeds toward the north, the Rhone to the south-west, and the Ticino to the south. As for the Inn, whose waters, under the name of the Danube, never rest until they face Asia, it begins a little to the east in the Grisons, near the Italian frontier: when it quits the federal territory, it is still a weak stream; in spite of the snows of Bernina, it rolls only 1750 cubic feet per second when it passes into Austria through the gorges of Finstermünz.

The Rhine receives fully two-thirds of the waters of Switzerland. It is formed in the Grisons by the union of the Vorder Rhein and the Hinter Rhein; this latter, the more powerful of the two, dashes through the formidable pass of the Via Mala; when the Föhn, a warm wind, dissolves the snow-masses and ice, and when the tepid rains melt the rime, the strangled river swells to monstrous proportions, the rapids, cataracts, and bristling rocks are all obliterated, and the waters rise more than 200 feet in this mountain fissure. The Rhine rolls a mighty flood when it flows out of the Grisons. At Sargans, it reaches a "critical" point in its course; if it should erode its left bank or raise its waters 15 or 20 feet, it would take once more its ancient route, when, instead of running north toward the Lake of Constance, it moved west-north-west through the lowlands occupied to-day by the Lake of Wallenstadt, the river Linth, the Lake of Zurich, and, lastly, the Limmat, an affluent of the Aar.

Before entering the Bodensee, or the Lake of Constance, the Rhine traverses the 120 square miles of alluvium with which it has already diminished this beautiful sheet of water. The Bodensee, lying at an altitude of 1306 feet, is shared by Switzerland, Austria, and Germany; it has an area of 208 square miles, with a maximum depth of 906 feet; the Rhine pours into it a turbid flood; it flows out with waters green and



THE VIA MALA.

pure, and carrying 4379 cubic feet per second at ordinary low water, and 11,650 at mean height; below Schaffhausen it pierces the limestones of the Juras, then falls 65 feet in the cataract of Laufen.

At some leagues from this spot the Rhine is more than doubled by the Aar, a mighty torrent which rolls at the same time the waters from the mountains of Berne, Uri, Glaris, Schwytz, and Unterwalden, and the crystal fountains of the Juras. The silvery Aar rises in glaciers; it precipitates itself 230 feet in the cataract of An der Handeck, it grows calm again in the deep lakes of Brienz (10 sq. m.) and of Thun (17 sq. m.), then it approaches the Juras so nearly that it almost touches the base of their escarpments. Near Aarberg, an artificial channel throws the stream into Bienne Lake (16 sq. m.), where it is purified; the limpid Thièle, the outlet of the Lake of Neuchâtel, flows into Bienne Lake. This sheet of 92 square miles ranks third in size among the Swiss lakes, being surpassed by Lake Lemman and the Bodensee only. When the Aar returns once more to its natural bed, it receives the beautiful Reuss, an affluent of the Lake of Lucerne, or the Lake of the Four Forest Cantons (43 sq. m.), and the Limmat, outlet of the sombre Lake of Wallenstadt (9 sq. m.) and of the smiling Lake of Zurich (34 sq. m.). It carries to the Rhine at ordinary seasons 17,938 cubic feet per second, while the Rhine rolls only 15,007; and in low water, 7345 cubic feet, 1342 of which is furnished by the Limmat and 1624 by the Reuss. The Rhine leaves Switzerland at Basel, with an ordinary flow of 35,000 cubic feet per second, 106,000 in the floods, and 14,089 at low water.

The Rhone has a smaller share than the Rhine in the Swiss Alps, but the deficiency is made up from the Alps of Savoy and Dauphiny, and it discharges into the sea a volume equal to that of the Rhine. It flows from a slope of Mount St. Gothard, and, except for the intervening mountains, its source is near the fountains of the Aar, the Reuss, the Rhine, and the Ticino: it leaps violently from the vault of the famous Rhone glacier, with a volume varying according to the seasons; in winter the flow is scant, but in July it reaches 636 cubic feet per second. It rapidly descends the Valais, which, viewed from above, looks like nothing more than a chasm between colossal, snow-crowned mountains, but the bottom of the valley, safely sheltered from the winds and concentrating all the sunlight, is torrid in summer and mild in the most severe months; it even has winter resorts, such as Aigle and Bex. In the Valais, the stream receives the Massa, which flows from the Aletsch glacier, the Viège or Visp, which gathers the rime of Monte Rosa (and for this reason it is more powerful than the Rhone itself), the Navisanche, the Borgne, and the Valaisan Dranse, — torrents which fall from the glistening chain of glaciers that separate the Valais from Piedmont. Swollen by all these turbid waters, it passes through the defile of Saint Maurice, between the Dent de Moreles and the Dent du Midi, and, after having straggled through the 34 square miles of alluvium which it has deposited in Lake Lemman, it flows impetuously into this wonderful blue basin; it is immediately lost, and its muddy waters become the crystal whose changeless grace and beauty are the marvel of Montreux, Clarens, Vevey, Evian, and Geneva.

Lake Lemman, or the Lake of Geneva, is the largest of the Swiss lakes as well as the most charming; it has an area of 221 square miles, a maximum depth of 1096 feet and a mean depth of 492; it lies 1230 feet above the sea; on the south stretch the jagged Alps, on the north the vine-clad Jorat hills, and on the west the monotonous Juras.

The Rhone issues from the Lake of Geneva with indigo floods like those of the

lake itself, and carrying, at ordinary seasons, 9534 cubic feet per second; at low water the flow is only 2895 cubic feet, and this has even been known to sink to 2295. Of the 710 square miles of the Swiss glaciers, the Rhone claims for its share nearly 400, or above one-half, the Rhine 290, the Inn 70, and the Ticino 50.

The Ticino leaps down a steep slope, which soon changes from an Alpine to a warm and glowing valley. Below Bellinzona, the very name of which proclaims what language is spoken on the banks of this magnificent torrent, it enters Lago Maggiore (88 sq. m.); this lake begins in Switzerland and terminates in Italy, after having engulfed the Tresa, which forms the outlet of the beautiful Lago di Lugano (20 sq. m.). The Ticino issues from Lago Maggiore with an ordinary flow of 11,335 cubic feet per second, of 1750 in extreme low water, and 140,000 in the freshets; it is henceforth Italian.

Four Countries, Four Peoples.—According to the census of 1888, Switzerland contained 2,918,000 inhabitants, on 15,964 square miles, or 183 persons to the square mile. It may, therefore, be called a very populous country, for the arable lands occupy the smaller part of the surface; these are found chiefly in the Juras, and in what is called the Plain, Plateau, or Valley,—that is, in central Switzerland, in the district stretching from the Lake of Geneva to the Lake of Constance and from the base of the Alps to the base of the Juras. On the middle slopes, on the plateaus that are not chilled by their altitude, we find the green pasture-grounds which make Switzerland famous for its cattle, milk, butter, and cheese; higher up are sombre forests of the trees of the north; higher still, deserts in which a few mosses and stunted plants defy the Siberia of the snow-masses, a few leagues away from the lakes of Italy.

Switzerland is a federation of twenty-two cantons and three sub-cantons, each independent and administering its own affairs at will. Naturally, these cantons are small: "When I shake my peruke, I powder the whole Republic," said Voltaire, speaking of the State of Geneva, which he overlooked at the same time with Savoy from his Ferney eminence.

Only three of the cantons have areas of any considerable extent: the Grisons, with their 2754 square miles; Berne, which comprises 2660; and the Valais, which embraces 2027. The smallest of the cantons, Zug, extends over 92 square miles, and the smallest of the sub-cantons, Basel Town, covers 14. Though the canton of Berne contains 537,000 inhabitants and that of Zurich 337,000, Lower Unterwalden has only 12,500.

German Switzerland.—German Switzerland occupies the east, north, and centre of the country, with 2,092,000 inhabitants, including the Germanophones of the Romand cantons; it embraces, therefore, seven-tenths of the Helvetic nation. It was here that national independence had its birth: it was three German Swiss, as history, or perhaps legend, tells us, who took the oath of Grütli;¹ the battles of Morgarten, of Sempach, of Näfels were gained by volunteers of this race, and Switzerland, little by little, was formed by annexations or conquests around the mountains which had produced the heroes of these three victories.

The Teutonic Swiss speak, in a variety of *patois*, a guttural German, one of the

¹ Grütli is a meadow-slope, under the Salzburg mountains, in the canton of Uri, where, according to tradition, Walter Fürst, Stauffacher, and Arnold von Melchthal met in 1307, and planned the uprising against the Austrians which resulted, two hundred years later, in the establishment of Swiss independence. The Swiss gained a great victory over the Austrians in 1315, at Morgarten, and another, at Sempach, in 1386. The latter engagement, rendered memorable by the heroic death of Arnold von Winkelried, is celebrated by an annual festival. — Ed.

harshest of the harsh group of Germanic tongues: this is not to be wondered at, if it is true that the highland idioms are distinguished from those of the lowlands by the strength and abundance of explosive gutturals.

French Switzerland. — French Switzerland occupies all of the three cantons of Vaud, Neuchâtel, and Geneva; moreover, a seventh of the Bernese, in various valleys and on various plateaus of the Juras; nearly seven-tenths of the Fribourg inhabitants, and more than two-thirds of the Valaisans, speak the French language: in all, 638,000 persons, something less than twenty-two hundredths of the federated people. The French Swiss have always contributed more than their share to the glory of the French literature.

Italian Switzerland. — Italian Switzerland (157,000 persons) comprises the slopes facing Italy, in the canton of Ticino, and a few valleys of the Grisons. It is of more importance than its diminutive size would warrant us in believing, for it sends out a great number of emigrants, who scatter themselves over the face of the whole earth: when the world shall contain the ten billion human beings predicted for it, many millions will be the descendants of the emigrants from the canton of three capitals. — Though Russia has only one head, Ticino has three, Bellinzona, Lugano, and Locarno.

Romansch Switzerland. — Romansch Switzerland contains only 38,000 inhabitants. The great mountains in which the Inn and the Rhine begin were once exclusively Romansch and Ladin; these two Neo-Latin dialects were the only idioms understood throughout the Grisons, in the mountains of Appenzell, and in a part of the Tyrol. But of late years the Romansch and Ladin inhabitants, wedged between Germany and Italy, possessing no written language, and gradually penetrated by German elements, have begun to abandon their *patois* for German: at every census their number is diminished, and their language is now spoken nowhere in Switzerland except in a part of the Grisons (on the upper branches of the Rhine) and in the Engadine, or upper basin of the Inn: this valley, the loftiest of the great European valleys, is between 3300 and 4300 feet above the sea.

The Romansch people emigrate in large numbers, like all inhabitants of high regions, — Savoyards, Auvergnats, Galicians, Highlanders or Kabyles; we find pastry-cooks, confectioners, and coffee-house keepers of this race in all the European cities. More than one, after having made his fortune, goes back to end his days in the village in his own Engadine, with its cold lakes, its virgin snows, its larch-tree woods, and its lordly Stone-pines which grow in forests to the very verge of the glaciers. The other Swiss also emigrate in great numbers; they leave their homes to the number of 5000, 8000, 10,000, and even 12,000 or 15,000, yearly, chiefly for the United States or the Pampas of the Plata.

Three-fifths of the Helvetians profess Protestantism, the other two-fifths are Roman Catholics.

Cities. — No Swiss city has a population of 100,000.

The federal capital, Berne, a German town, on the banks of the Aar, contains only 46,000 inhabitants; it is less populous than Zurich, the "Helvetic Athens," situated on the Limmat, at the point where this river leaves the Lake of Zurich: exclusive of suburbs, the Swiss Athens has only 28,000 inhabitants, but with these it contains 90,000, which gives it the supremacy in the Confederation; Basel, also in German Switzerland, an exceedingly wealthy town, on the great bend of the Rhine, has a population of 70,000.

Geneva (50,000; 72,000 with the suburbs) ranks first among the cities of French Switzerland. It is here that the Rhone issues from the azure lake in a blue transparent flood, the most beautiful stream of the world from the spot where it quits Lake Lemman to the point where it meets the turbid Arve.

FRANCE.

Name, Boundaries, Extent. — France, which bore the name of Gaul when history mentioned it for the first time, took its present appellation from the Franks, a Germanic tribe which invaded the north-eastern portion of the country during Rome's declining days. One of their blood-stained, petty kings established himself in Lutetia, or Paris, a town on the Seine where the Emperor Julian had had his palace. At the time of the Frankish invasion, the Celtic inhabitants of Paris no longer understood the language of their fathers; for Gaul, too, had been caught in the web spun over Europe, Asia, and Africa by that gigantic spider which stealthily eyed all nations from its station in the middle of the Mediterranean, at the centre of the Old World. With one of its falces it seized Gaul a few decades before the Christian era. And Gaul abandoned her Celtic for Latin, the language of the soldiers, judges, lawyers, process-servers, tax-gatherers, government officers, merchants, coxcombs, actors, and dancers.

The smiling country around Paris, enlivened by the limpid Seine, the tortuous Marne, the Oise and her sister stream, the Aisne, was called from its Frankish masters *Ile-de-France*, or simply *France*. With the advance of Parisian hegemony, this name was extended over five-sixths of ancient Gaul, from the English Channel to the Pyrenees, from the ocean to Belgium, Germany, Switzerland, and Italy. The France of to-day is bounded on the north-east by the kingdom of Belgium, on the east by Germany, Alsace-Lorraine, and Switzerland, on the south-east, beyond the Alps, by Italy, on the south, beyond the Pyrenees, by Catalan, Aragonese, and Basque Spain. Elsewhere, it borders the waves: on the north the North Sea and British Channel, on the west the green Atlantic, and on the south-east the blue Mediterranean. France embraces 205,986 square miles¹ of territory, with something over 38 million inhabitants,² or about 185 to the square mile.

The French Mountains. — The lordliest summit in France, Puy-de-Sancy (6188 feet), rises in Mont Dore, a *massif* which once ejected flames from craters that are at present filled by lakes. North-north-east of the Dore are the old blisters and extinct volcanoes of the Dôme group. Sixty of these mountains once smoked. Puy-de-Dôme (4807 feet) is their culminating summit. Besson, west of the Dore and the Dôme masses in the granitic and gneissoid mountains of Limousin, reaches an elevation of 3209 feet. South of the Dore rises the Cantal mass, with its beautiful meadows, torrents, and cataracts. The loftiest summit is the Plomb du Cantal (6096 feet). It is of volcanic formation; and its idyllic valleys stretch away in a fan-shaped cluster at the base of basaltic colonnades, pumice-stone, lava, and trachyte that has been chilled from time immemorial. The mountains of Aubrac, south of the Cantal,

¹ According to General Strelbitsky.

² According to the census of 1891, 38,095,000. The population of the cities, pages 159 to 162, is also taken from the census of 1891. — Ed.

are in part volcanic, on a pedestal of granite, gneiss, and mica-schist. The highest peak is the Mailhebiau (4826 feet). The mountains of Velay (4669 feet), east of the Cantal, are likewise volcanic; they still exhibit from 150 to 200 craters.

West of these masses stretches the Margeride chain (5099 feet), which is composed wholly of hard rock. It is black with forests, and bars the horizon with a uniform, inflexible ridge. The mountains east of the Velay are nearly all volcanic, — such as the Mézenc (5755 feet), jagged Mégal, Tanargue, lashed by powerful rains, Coiron, and the mountains of Ardèche. All this region, with its basaltic columns, its cata-racts dashing over crumbled lava, its rugged stairways and arrowy corridors cut in



IN VIVARAIS — ON THE ARDÈCHE.

the volcanic rock by the torrents, its huge natural bridge,¹ its crater lakes, certainly rivals the most charming and the most wonderful in the world. From these mountains we pass to those of Lozère (5584 feet), by the Forest of Mercoire (4925 feet), and the Goulet (4918 feet). The Lozère mountains, which are formed of granite, mica-schist, and schist, are connected with the famous Cévennes.

From their juncture with the Lozère, the Cévennes trend to the south-west under different names, — Cévennes proper, Aigoual, Saint-Guiral, Espérou, Séranne, Escandorgue, the Garigues, Espinouse, and the mountains of Lacaune, the Montagne-Noire, and the hills of Saint-Félix. This diversified chain, sometimes limestone, sometimes granitic, sometimes schistose, is the arena of tremendous climatic combats,

¹ The bridge of Arc, over the Ardèche.

conflicts of winds and rains, tempests, and raging snows. The far-off ocean struggles here with the neighboring Mediterranean, on the peaks, in the cols, on the vast plateaus, on Causse Méjan, Causse Noir, and especially on Causse Larzac, over which mighty hurricanes sweep. North-west of the Cévennes, notwithstanding the latitude, the sky is wan and foggy, and frosts and snows are frequent. But to the south-east, among the olive-trees, racked by the *mistral*, among prodigious chestnut-trees which have witnessed the lapse of centuries, nature is dry, parched, and glistening, and the sun sleeps on gilded rocks. Mont Aigoual (5141 feet), the culminating summit of the Cévennes, attracts the clouds from the Mediterranean; and those from the Atlantic reach it above the Causses. The annual rainfall on its flanks is nearly 100 inches; and it is, perhaps, the most humid of all the southern mountains of France. At its base, on the north, stretches Causse Méjan.

The plateaus of the Causses, which are of limestone formation, as their name (from the Latin *calx*, lime) indicates, are perforated with chasms and tunnels, called *avens*, *embues*, *tindouls*, *cloups*, or *igues*. These openings, which are often of immense depth, absorb every drop of moisture, so that the Causses are wholly destitute of springs or running water. But beneath the spongy rock the lost rills unite; the waters are purified in the gloomy shades, and finally leap up to the light once more, in limpid fountains on the rim of the Causses. The most important of these plateaus are Causse Méjan and Causse Larzac.

Causse Méjan supports, on its waterless though not wholly treeless surface, 2100 Caussenards, who are separated from the rest of mankind by stupendous abysses. On the north, east, south, and west, for a distance of 99 miles, this "steep, shoreless island" terminates abruptly on the vast void. With an area of 139 square miles, it rises in one block, 2950 to 4193 feet in altitude, between the Tarnon, the Tarn, and the Jonte; it plunges over Florac by jagged bastions, looking, when stippled by the fog or blurred by the rain, like some fantastic fortress such as man could never rear. It descends on the Tarn for 32 miles by escarpments from 1600 to 2000 feet high, and on the Jonte by perpendicular rocks equally terrific. Its most celebrated chasm is that of the Picouse. It pours into the Tarnon the springs of Florac; into the Tarn, the Ardennes spring.

The largest of the Causses is Larzac; it covers fully 385 square miles, and stretches from the Dourbie to the Sorgues, from the Tarn to the gorges which open on the Hérault and the Orb. It has an elevation ranging between 1950 and 2950 feet. This sunny Causse is the empire of rock-work. The cold *aouro negro* or *rouderge*¹ whistles through the fragrant boxwood bordering the by-paths, and makes the pebbles dance in villages from which Saint-Guiral,² snow-capped in winter, is visible. This plateau is like a col between Mont Aigoual and the Monts de l'Espinouse, a col where pass and repass the winds and the clouds in their mad course between the ocean and the Mediterranean. Copious rains therefore fall on this chaos of stone, and Larzac, rent in all directions with *avens*, pours out the most beautiful fountains of the Causses.

The Vosges and the Juras. — On the sandstones, schists, and granites of the Juras, the moss, grass, and heather growing in the shade of the woods filter the torrents which make the limpid Moselle. The eastern Vosges, which France lost in 1871, contain the highest dome of the chain, the Ballon³ of Soultz or of Guebwiller, which

¹ The "black wind," the north wind.

² Rising 4426 feet, behind Mont Aigoual.

³ The greater part of the summits of the Vosges, which are rounded eminences, are called *ballons*.

reaches an altitude of 4678 feet; in the western Vosges, which are better watered, since they face the ocean, the loftiest elevation is the Haut d'Honeck (4482 feet), though there are several other *ballons* nearly as high. This mountain has beautiful meadows, lakes, lakelets, pretty water-falls, and sparkling rivers; it is covered with rigid firs or austere masses of oaks, beeches, and chestnuts: deciduous trees and evergreens mingle here, or group themselves in forests, which are the finest in France.

In the south, the Vosges descend on the Belfort gap, a broad opening at an altitude of only 1050 feet, through which pass rivers, a navigable canal, roads and railways. On the other side of this col the Juras skirt the horizon. Like the Vosges, the Juras are not solely French. In the east, they are Swiss, and beyond the falls of the Rhine they become German, under the name of the Rauhe Alp and Franconian Juras. They are composed of limestone¹ and chalk² on Trias and Lias, and have none of the characteristics of the normal mountain-chain, like, for example, the Pyrenees; they are merely a plateau, rising gradually toward the east, and supporting numberless ranges,³ which run in parallel waves. The first and lowest of these volutes overlooks the plains of the Saône, flat and wooded Bresse, and feverish Dombes; the last and loftiest commands the plains of the Aar and the lakes of Neuchâtel and of Geneva; the Crêt de la Neige (5656 feet), the lordliest summit of the French Juras, as well as of the whole mountain-mass, rises in this wave.

As on the Causses, the pedestal which supports the chains of the French Juras drinks in the rains and the waters of the heaped-up winter-snows through an infinite number of fissures and swallow-holes; in this way subterranean rivers are formed, which flow out in fountains as powerful as those from the Causses: such, for instance, are the sources of the Loue, the Dessoubre, the Lison, and that of the Orbe, a river which comes to the surface again in Switzerland; but it is French above the point where it is absorbed. These crystal currents glisten at the bottom of *cluses* or narrow gorges with fir-tipped, rocky battlements; from these cluses we climb to the plateau through *combes*, which are sometimes dry ravines, sometimes eroded cirques, with beautiful fountains and transparent streams.

The Great Alps. — The Goliath of the Alps, glacier-clad Mont Blanc (15,781 feet), belongs partly to France; it rises south-east of Geneva, on the borders of France, Italy, and Switzerland. Toward France it spreads out 66 square miles of ice, toward Italy 27, toward Switzerland 15, making a total of 108 square miles.

We must mention even after this European giant the mountains of Tarentaise; — la Vanoise (12,668 feet), which distributes the muddy torrents of its glaciers between the Isère and the fiery Arc; — the mountains of Maurienne (11,483 feet), which also supply the Arc, and which contain Mont Cenis, whose tunnel of 40,092 feet cuts a way between France and Italy; — the Grandes Rousses (11,395 feet), sparkling with rime; — the mountains of Oisans, which have 64 square miles of persistent snows, and which rear in the Pelvoux mass Barre-des-Ecrins, a peak of 13,461 feet, the highest summit in France before the annexation of Savoy; — south of Mont Pelvoux, no mass reaches 13,000 feet, but several surpass 9500. The Great Alps extend as far as Nice.

The Little Alps. — The Great Alps, which are composed of granite, gneiss, schists,

¹ The chain has given its name to the Jurassic limestone.

² The *craie néocomienne* takes its name from Neuchâtel (in Latin, *Neocomum*), a town of the Swiss Juras.

³ One hundred sixty in the Franco-Swiss Juras alone.



A GAULISH TROOPER.

and of various sandstones, are prolonged on the west by other much lower, though still lofty Alps trending from north to south; the latter are for the most part of limestone and chalk formation, and the rock of the most northern is quite similar to that of the Juras, whose direction they continue south of the Rhone. The Little Alps of Savoy, which attain an elevation of 8200 feet, would be imposing anywhere else, but Mont Blanc towers too near them: in their folds lie two famous lakes: the Lake of Annecy, with an area of 12 square miles and a depth of 164 feet; and the Lake of Bourget, which embraces 17 square miles and has a maximum depth of over 300 feet.

The Grande Chartreuse (6847 feet), justly famed for its rocks and forests, rises to the north of Grenoble, on the right bank of the Isère. The Monts du Lans and the Monts du Vercors (7697 feet), on the left bank of the Isère, facing the Grande Chartreuse, shoot up in bold rocks, illuminated by the southern sun. They resemble the Juras in their sharply cleft fissures, in the *scialets* or tunnels of their plateaus, and the glistening water of their cluses. The mountains of Drôme (6644 feet) are a prolongation of the Monts du Vercors; they are of the same nature and structure, though with warmer colors, for we enter with them the land of the olive-tree. Mont Dévoluy (9164 feet) likewise belongs to the Vercors.

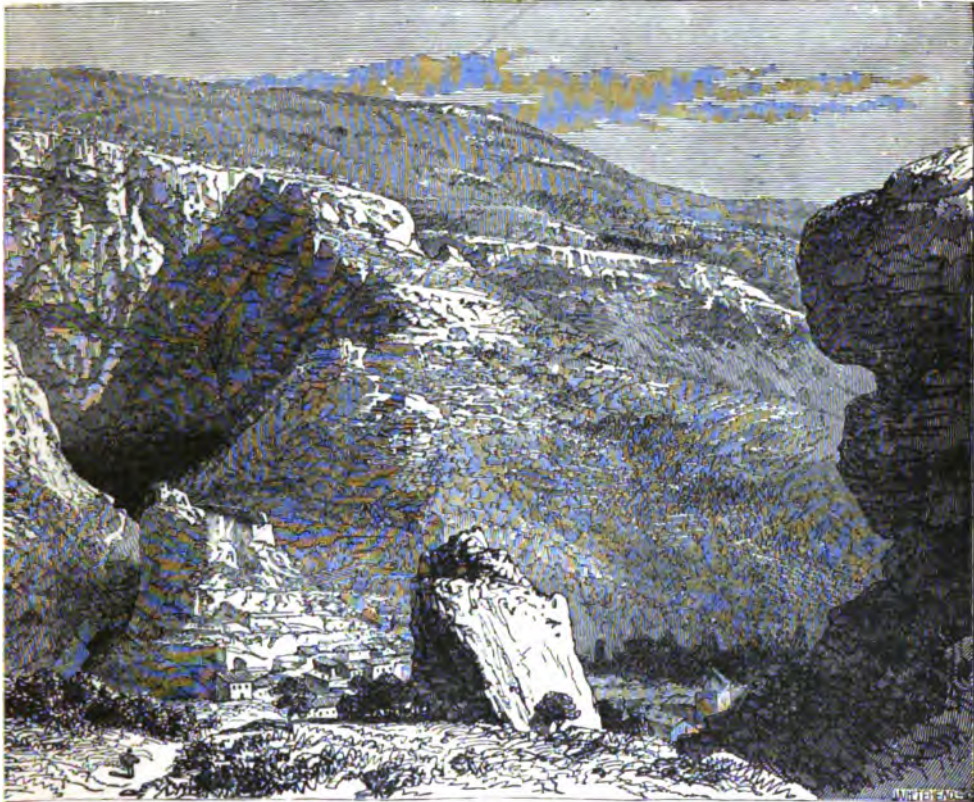
Mont Ventoux (6273 or 6322 feet), a monstrous excrescence, often covered with snow, can be seen from Avignon and from the great valley of the Rhone; this "father of the winds," which blow cold over the warm plain, is prolonged on the east by the mountains of Lure (5994 feet), chalky like itself and like the mountains of Vaucluse (3894 feet); under these three *massifs* are collected the waters which form the magnificent fountain of Vaucluse, the Sorgues or spring *par excellence*, which merited a greater poet than Petrarch. Lubéron (3691 feet), or Léberon, lifts its rocks gilded by the Provençal sun above the Durance. The mountains of Marseilles, — Tréverasse, Sainte-Victoire, the Monts de l'Etoile, Sainte-Baume, all have warm colors worthy of Africa; they are rocky, ragged, sunlit, and fragrant, with scant but living waters; their culminating rock, in the Sainte-Baume, has an elevation of 3786 feet. The mountains of Provence, likewise naked and glittering, rise still higher, to 5627 feet, in the pyramid of Lachen; in their valleys there are admirable springs, called *foux*, which are of priceless value to the inhabitants of this hot country.

The Pyrenees.—The Pyrenees are divided between France and Spain. They rise in a single ridge, with lateral projections and spurs. In France, they run from the Mediterranean to the embouchure of the Bidassoa in the Gulf of Gascony, 267 miles in a straight line, and 354 if we follow the highest crest; they are much longer in Spain, where they extend under different names as far as the *rias* or estuaries of Galicia.

The culminating rock of this notched range, the Pic de Néthou (11,165 feet), in the Maladetta *massif*, instead of springing up out of the "most Catholic kingdom," ought to separate the two peoples, since it overlooks the Val d'Aran, the cradle of the French Garonne, and since the waters of the Goueil de Jouéou, the finest source of this stream, flow from one of the Maladetta slopes. Unlike the valley of Aran, which is politically Spanish but orographically French, Cerdagne, the cradle of the Spanish Segre, is Spanish by nature but French by treaty. In both countries the Pyrenees are grand: their hues, their boldness of outline, their descent on two seas, one green and tempestuous, the other blue, and their climate, make them perhaps more attractive than the Alps. Spain possesses their loftiest peaks, their largest

lakelets, their wildest scenery, their deepest cañons, and their most savage *barrancos*; ¹ their most extensive snow-fields, their greatest glaciers, their purest torrents (*gaves*, as they are locally called), their gloomiest forests, and all their meadows, are in France.

In France, Mont Vignemale (10,820 feet) surpasses the other peaks of the Scie des Pyrénées; sparkling with rime, it shoots up at the south-west of Caunterets, a noted health-resort abounding in mineral springs. There are some hundreds of such springs in the Pyrenees. Vignemale commands the mountains of Gavarnie, in the rocks of



VAUCLUSE.

which cirques have been scooped out, or, as the Pyrenean shepherds express it, immense *oules*,² such as Gavarnie, Estaubé, and Troumouse. Troumouse, at the base of the Munia (10,335 feet), is the most vast of these arenas; Gavarnie is the most imposing. Peaks with sonorous names — Taillon, Casque du Marboré, Tours du Marboré, Pic du Marboré (10,673 feet) — precipitate into its abyss their melting snows, their crumbling ice, their avalanches of rock, and, from a height of 1385 feet, the new-born Gave falls in mist-like rain on the débris of the cliff.

A number of peaks in the French Pyrenees rise above 10,000 feet, notably in Néouvielle (10,479 feet), a mighty spur near Gavarnie, and in the mountains of Luchon

¹ Ravines, or gorges.

² Porridge-pots.

(10,318 feet). The first peak above 10,000 feet which we encounter on coming from the Atlantic is Balaitous (10,322 feet); the first on coming from the Mediterranean, Montcalm (10,105 feet), which touches the Pique d'Estats (10,302 feet). Three other peaks have the appearance of being still higher, as they rise in the foreground. These are the Pic du Midi (9439 feet), which contemplates the sources of the Adour, the valley of Campan, the plain of Tarbres, Armagnac, and Landes; Mont Vallier (9314 feet), lordly and magnificent, visible from the entire plain of the Garonne above Toulouse; lastly, and chiefly, Mont Canigou (9137 feet), standing out so proudly that it was for a long time celebrated as the highest peak of the Pyrenees: it is visible, or, rather, one gets a suspicion of it, from Barcelona in Spain and from Marseilles in France; it overlooks the rugged Albères¹ and the dry and jagged Corbières, which are grouped around Mont Burgarach (4039 feet), and which terminate over the valley of the Aude facing the Montagne-Noire of the Cévennes.

Plains.—Several of the great French plains are in the neighborhood of Paris.

Beauce, a vast level tract south and south-west of the metropolis, between the Seine and the Loire, was formerly wooded; all that remains now of these woods is the forest of Orléans (156 sq. m.), the most extensive but by no means the most beautiful in France; it is destitute of springs, as its porous soil drinks the rain as fast as it falls. Beauce is said to lack only six things, namely, fountains, meadows, woods, rocks, orchards, and vineyards. But it merits its title of "Granary of France." According to the season, it is covered with waving green grain, golden crops, or close-shaven stubble. South of Orléans, opposite Beauce, and at the same altitude (300–500 feet), is Sologne, a flat, sandy tract, with rusty, muddy ponds, heavy, stagnant rivers, and forests in which aciculars predominate; the Solognot lives there in poverty, and, although the country has ceased to merit the name of hospital and cemetery, fevers still consume its wan inhabitants. It extends from the Loire to the Cher. East of Paris, on both banks of the Marne, from the Seine to the Aisne, and from the masses of Lutetia to Argonne, stretches Champagne Pouilleuse; it is composed of hard chalk, and presents a picture of crabbed sterility facing glorious abundance, for at its western extremities the wine of Champagne flows from the famous hill-sides of Epernay. "Pouilleuse" signifies poor, wretched; the entire fortune of this plain consists of the recently planted pine and fir groves, and powerful springs forming the heads, or, as they say here, the *sommes* of limpid rivers, which are bordered by meadows and obstructed by factories.

But the largest French plain (5400 sq. m.) is a tract in the south-west, extending from the Adour to the Garonne and the Gironde, and from the hills of Armagnac and Agenais to the shores of the Atlantic. This district, called Landes, from the *landes* which occupy its greatest portion, is generally thought to be unattractive, but, on the contrary, it possesses wild charms and wonderful beauties; it opposes to the tempestuous ocean the highest dunes of Europe (292 feet); behind these white sand-banks, on which forests of sombre pines vibrate, long ponds slumber, without a murmur, though so close to the heaving, resounding Atlantic; and back of these pools lies an immense, boundless plain with its cork oaks, which are being stripped, its pines, which are being mutilated for their resin, its heather, broom, and buttercups, its straight avenues which stretch away to the horizon, and its clearings where the sun sets big and blood-red as on the sea. It is not long ago that the Lanusquets, or Landescots, were to be seen mounted on stilts three or four feet high; guarding their

¹ This name is given to the Pyrenees in their eastern extremity, near where they descend into the sea.

flocks on the heaths; at a distance they looked like giants. They paid no heed to the thorny broom, the ditches, or the pools, and with one stride they crossed the brooks of Landes.

Seas, Coasts, Streams.—France enjoys the rare privilege of looking out on four seas, namely, the North Sea and the British Channel on the north, the Atlantic on the west, and the Mediterranean on the south.

On the North Sea, the dunes of Flanders—which in olden times won for Dunkirk (pop. 40,500) its Flemish name, signifying the “church of the dunes”—give place, near Calais, to the capes of Boulonnais, which face Albion’s white cliffs across the Strait of Dover. In its narrowest portion this channel is 19 miles broad, and it is here that England and France will some day be joined by a tunnel pierced through.



A SCENE IN LANDES — SHEPHERDS ON STILTS.

the chalk; this submarine pathway will be 30 miles long, and will pass beneath more than 400 feet of rock. Beyond Boulogne (pop. 46,000), on the British Channel, the sands begin again in dunes that have not yet been fixed; after passing the mouth of the Somme, we encounter the imperious cliffs of Normandy, rising perpendicularly for 300 feet and more; the coast of Normandy has no beaches except sandy patches here and there; it is destitute of estuaries, and its *valleuses* permit the passage of nothing more than slender meadow-rivers, and now and then a stream from some large fountain. The waves are eroding it, the springs are undermining it, and it is falling into the sea in immense blocks. The Channel is advancing, and Normandy is retreating. The shores continue in the same way to Dieppe (pop. 22,000) and on to Havre and the embouchure of the Seine (6 miles broad). From the Seine to the point where the waters of the Channel are confounded with those of the Atlantic, the sea drearily gnashes the jagged rocks of the Norman and Breton coast. Cherbourg (pop. 39,000),

an important naval station, watches England here from the Norman peninsula of Cotentin. Normandy terminates at Mont Saint-Michel, a picturesque rock rising out of Cancale Bay, and surmounted by a famous old abbey. The coast of Brittany contends with a fierce sea, but the compact rock is feebler than the incoherent waves, and the shore is giving way under their ceaseless onslaughts. Broad bays lie here at the extremities of little rivers that flow down from a sombre land of granite, schist, and slate, a land of forests, broom, and heather, a land abounding in barbaric monuments—in dolmens, peulvans or maenhirs, in cromlechs, and tumuli. This austere land of Brittany gives birth to an austere people, the Bretons, men of deep feeling and great obstinacy; the sons of Arvor or Armor,¹ the men of the “granite, oak-covered land,” make the hardest soldiers and the best sailors of France. In the western part of their country, in the peninsula proper, Celtic is still spoken, a language several thousand years old, and which will soon become extinct. Saint-Malo, on this part of the Breton coast, is a fortified port, a town of heroes, of mariners, and of buccaneers.

Near Ushant, a sea-rocked island every reef around which tells a tale of shipwreck, the coast turns, and we enter the Atlantic.

France has 740 miles of seaboard on the North Sea and the British Channel, and 860 on the Atlantic. Among the ample bays of the Atlantic coast may be mentioned: the roadstead of Brest, an immense, land-locked harbor, with a fortified city, which is reached by a formidably defended channel; the bay of Douarnenez, on which there are twelve hundred fishing hamlets; the open, tempestuous bay of Audierne; the estuary of Lorient (pop. 42,500), a fortified port, where the river Blavet empties into the Bay of Biscay; Morbihan, studded with islets, and opening near the Carnac lines of monuments, the most celebrated of all the megalithic fields; the embouchure of the Loire, 7 miles broad. Beyond the Loire, we reach the bay of Bourgneuf, where we pass from Brittany into Poitou. The seaboard here, which is at first dunes, soon becomes the rim of the Poitevin Marsh. This swamp, which was once a gulf extending as far as Luçon, Niort, and Aigrefeuille, is daily enlarging, at the expense of the ocean, which it has diminished by 150 to 200 square miles. All that remains of the old bay, which advanced 37 miles into the land, with an entrance width of 18, is an arm which penetrates 4 or 5 miles inland, with an entrance breadth of 6. This French Holland is slowly forming around limestone islets and dunes, which are occupied by small hamlets. The fortified town of Rochelle (pop. 20,000) lies on this coast.

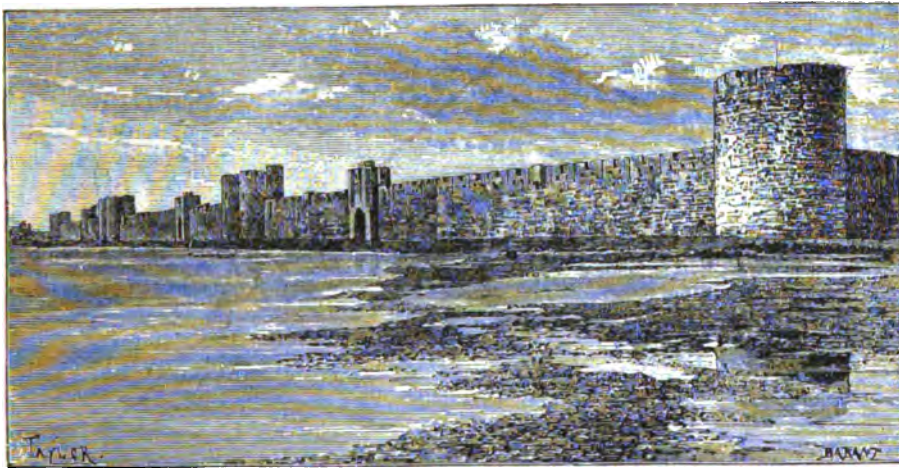
Beyond the Gironde, dunes run due south as far as the Adour, without a bay or harbor at the river-mouths. Back of the dunes, which are covered with black pines, stretch long pools of water, and back of these are heaths as far as the horizon. All this seaboard sees neither mariners, nor fishermen, nor husbandmen, nor tradesmen. The dunes belong to the woodsmen; there, the *gemmeur* collects the turpentine, and listens to the moaning of the sea and the pines. From the Adour to the mouth of the Bidassoa, where the Spanish coast begins, the shores are rocky. They are inhabited by Basque fishermen.

On the Mediterranean, at the base of the Pyrenees, the coast is at first rocky with magnificent coves; but rock soon gives place to sand. A littoral cordon, extending in long, straight lines, shuts off from the Mediterranean extensive ponds (*étangs*), which would be invaded by the sea if there were any tide here. South-west, south,

¹ Armor, on the sea, the Breton name of Brittany.

and south-east of Montpellier lies the tangled net-work of the étangs of Aigues-Mortes, a solitary town, surrounded by walls which date from the thirteenth century, but which look as though they were built but yesterday. These ponds are continued beyond the Little Rhone, in the vast marshes of the Camargue; and the latter are prolonged beyond the Great Rhone by the étangs of lower Crau. Nearly the entire region is unhealthful, but it was formerly incomparably more so. The Etang de Berre, beyond the mouth of the Rhone, is an inland sea, of 60 square miles. It communicates with the Mediterranean through the channel of Martigues, and is still more closely locked than the roadstead of Brest. It is capable of receiving an immense fleet, and is destined to become one of the great harbors of the future.

At this point the scenery changes; from low, miasmatic shores, desolated by the *mistral*, which prevails from the Albères to the mouths of the Rhone, we reach a coast of fairy-land, — a sunlit garden. Here, the tree *par excellence* is no longer the



THE WALLS OF AIGUES-MORTES.

olive, twisted by the blasts, but the orange-tree, which flourishes in sheltered spots; and, beyond Toulon, the palm itself is found along the Provençal coves. The littoral cordon of sands is replaced here by the ravines and cirques of the limestone Alps; here, too, rise the granitic, serpentine, sandstone, and porphyritic rocks of the Maures and the Estérel, their varied hues blending with the brilliant green of the foliage and the blue of the billows. Every cove has its fishing-boats, every bay its trading vessels and war-ships; and Provence is another Brittany. Marseilles is the first commercial port in France, and almost the first in Europe; Toulon outranks the naval ports of Cherbourg, Lorient, Brest, and Rochefort. Beyond the Rade of Hyères begin the famous winter-resorts where the dying come in quest of life, and where the aged seek restoration of youth. Such are Saint-Tropez, Saint-Raphaël, Cannes, Antibes, Nice, Monaco, and Menton; then the charming shore changes from Provençal to Ligurian.

Great Fountains. — Rivers. — France owes to her ever restless, ever living seas the copious rains which supply four great streams, abundant rivers, and countless magnificent springs. In the south-east, these large fountains are called *foux*, and in

different parts of France they are known under the various names of *doux*, *duis*, *dhuis*, *doué*, *douet*, *doult*, *doux*, *douce*, *douze*, etc.

The most celebrated of all these fountains is that of Vaucluse, near Avignon. Vaucluse, as its name, *Val clos*, signifies, is an enclosed valley. The Sorgues, which gathers the tribute of the avens of Ventoux, Vaucluse, and the mountains of Lure, besides the subterranean waters of the Nesque and the Coulon, leaps out here in a cataract at the foot of a formidable, perpendicular rock, 387 feet high, vividly colored, fulvid, white, red, and glowing, — the south in all its glory. During the two hundred¹ years that observations have been made here, the smallest flow noted was on the 17th of November, 1869, 194 cubic feet per second. The volume rarely sinks below 282; it rises to 4237, and its mean may be estimated at 600. This marvellous spring runs more than 200 factories; it waters the plain of Comtat, and is finally lost in the Rhone.

The four great streams of France are the Seine, Loire, Gironde, and Rhone.

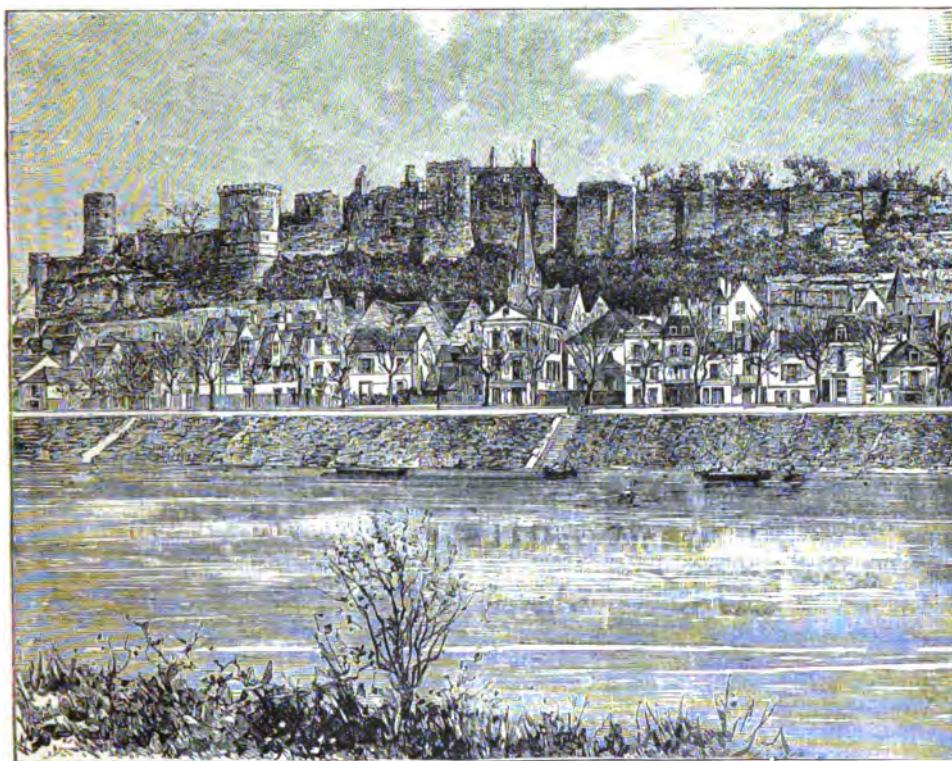
The Seine. — The Seine has a length of 482 miles, in a basin of 30,000 square miles. Its ordinary flow is 8934 cubic feet per second at Rouen, at which point it has received all its large tributaries. It rises in the limestones of Burgundy, at an elevation of 1545 feet, and passes Troyes, Paris, and Rouen. It unites in its channel the white Aube (140 miles), which traverses Champagne Pouilleuse; — the Yonne (182 miles), offspring of the impervious Morvan: it is this Burgundian river which contributes the largest share to the floods of the Seine at Paris; — the Loing (99 miles), which descends from Puisaye and Gâtinais, and whose valley forms one of the highways between the Seine and the Loire; — the Essonne (62 miles), the ideal of a peaceful current; — the Marne, 280 miles long, but quite scant, which flows down from the plateau of Langres through Champagne Pouilleuse; — the Oise (186 miles), which comes from Belgium: it receives the Aisne (174 miles), which issues from Argonne; — the Eure (140 miles), a limpid, perennial stream, which rises in Perche, and passes through Beauce.

The Loire. — The Loire (621 miles) spreads its net-work of rivers over a basin of about 47,000 square miles, consisting largely of hard and compact soil. At Orléans, for example, at the great bend which brings it near Paris, 210,000, 350,000, or perhaps 425,000 cubic feet of water sometimes whirl there in a broad channel where summer often leaves not more than 1150, 1050, or even 850 cubic feet; when the channel can no longer contain the floods, they rage through the fields, in spite of the levees within which they are imprisoned. The stream which can thus multiply its summer flow five hundred times rises less than 95 miles from the Mediterranean, at an altitude of 4505 feet, in the Monts du Mézenc, on the flank of the volcanic pillar of Gerbier de Jonc (5125 feet). Its natal land is superb: it descends between old volcanoes, a transparent torrent; it leaves on its left the wonderful town of the basaltic rocks, Puy-en-Velay, and lower down, on the right, Saint-Etienne, a black factory town; then it passes into the wet plain of Forez, which was once a lake with craters blazing on its shores. At Roanne, at Nevers, and as far as Briare it moves directly toward Paris; above Orléans it veers to the west and runs to the Atlantic, past Blois, Tours, and Saumur. At Nantes, with the aid of the tide, it carries big ships, but its broad estuary is filling up with sand and mud, and fewer and fewer large vessels enter this harbor; the stream finally reaches the sea at Saint-Nazaire. Its mean flow is perhaps 84,750 cubic feet (?).

¹ Since 1683.

The Loire unites in its channel the Allier (255 miles), as long as itself, and almost as powerful;—the Cher (199 miles), the central river of France;—the graceful Indre (152 miles), which begins in Berry and terminates in Touraine;—the Vienne (231 miles), a large affluent, which passes Limoges in Limousin, Châtellerault in Poitou, and Chinon in Touraine;—the sombre Maine of Angers. Below the mouth of the Maine, the Loire, having reached its full size, rolls at low water 4484 cubic feet per second.

The Gironde: Garonne and Dordogne.—The Gironde, an enormous estuary of a mediocre river, is 47 miles long, from 2 to 7 broad, with a width of 3 at the



THE VIENNE AT CHINON.

embouchure, between Royan and Le Verdon: on the right of its turbid water stretches Saintonge up low clay cliffs; on the left lies Médoc, a land renowned for its vineyards.

This estuary rolls towards its mouth or towards its source, according to the tide, 10,600,000 cubic feet per second: a vain show, for, beyond the point where the influence of the tide is felt, the Gironde carries down to the sea a mean of only 41,600 cubic feet per second (?), the tribute of about 32,800 square miles. The Gironde begins at Bec d'Ambès, at the confluence of the Garonne with the Dordogne; at this point the Dordogne is as broad as its rival, but the Garonne (357 miles) is longer than the Dordogne, and drains a larger area (22,080 sq. m.); the Garonne is in reality the parent of the Gironde.¹ Issuing from the Spanish valley of Aran, in the central

¹ Gironde is simply a corruption of Garonne.

Pyrenees, it flows around the plateau of Lannemezan, the sterile starting-place of divergent rivers, all of which are weak and turbid; then it skirts Landes on its left bank. At Bordeaux, swollen by the tide, it forms a crescent-shaped harbor; this harbor, which is one of the finest in France, receives transmarine ships; but it is threatened in its very existence by the down-stream deposits of mud. The Garonne unites three superb Pyrenean torrents: the Neste, which furnishes the plateau of Lannemezan with a feeding canal, the waters of which are divided among the rivers flowing off this plateau; the Salat; and the Ariège; it receives also two long rivers, the Tarn and the Lot.

The Dordogne (304 miles), a superb river, limpid and swift, drinks the streams of about 9200 square miles, not a half of the basin of the Garonne. It descends from the Puy de Sancy, and it receives a great deal of water from the Dore and the Cantal masses; the Vézère brings to it the brownish and reddish water of Limousin, the Isle (146 miles) pours into it the pure water of the chalks of Périgord. Libourne, with a tidal harbor, is the only city of any size on the banks of the Dordogne. The Dordogne, at the point where it encounters the Garonne, is about 4000 feet broad, with a mean flow of less than 12,350 cubic feet per second, carrying at low water 1750, and in the greatest floods 254,000; — the floods of the Garonne exceed 388,000.

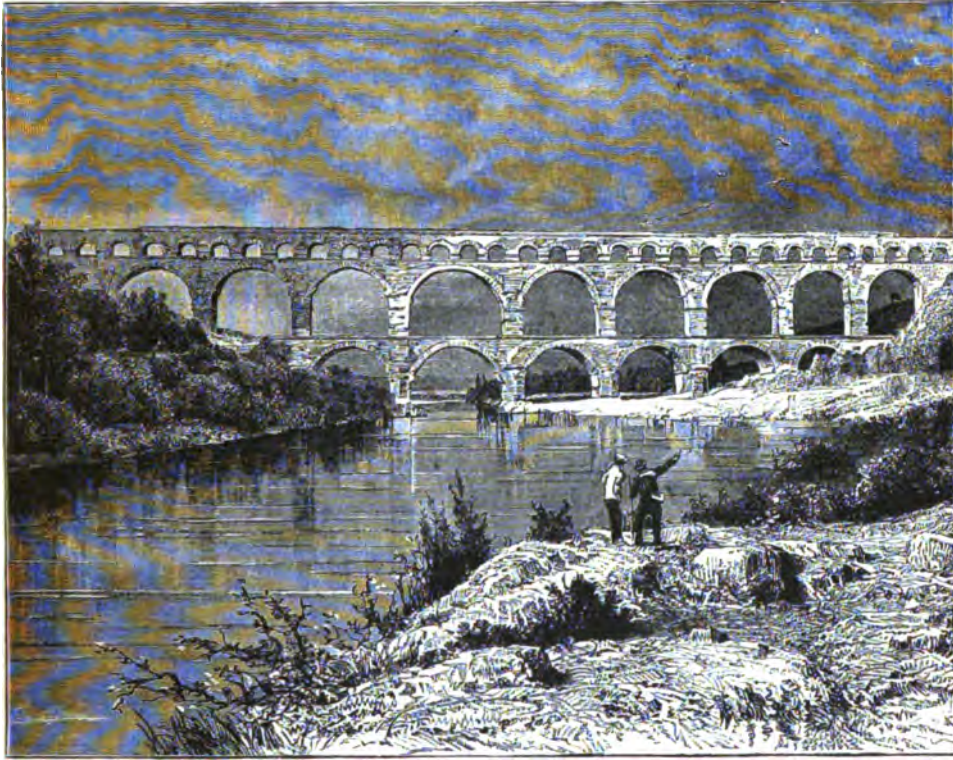
The Rhone. — The Rhone (504 miles), emissary of less than 40,000 square miles, is a great and glorious stream, not only in France, but in Europe, and even in the world, — great and glorious in its glaciers, its lakes, its torrents, its gorges, its heroic adventures, and its beauty. Scarcely has it left Lake Lemman, at Geneva, blue as the sea, when it loses its transparency from contact with the Arve, a cold, turbid glacier-flood which mingles, in low water, 1300 cubic feet with the 2300 to 2475 of the Rhone, and on the average 5650 cubic feet with the Rhone's 9534, that is, a mean for the two streams united of 15,184 cubic feet. The imperious torrent almost immediately enters France, where it cuts through the Juras and the limestone Alps.

At its confluence with the Saône, which is powerful in winter, the Rhone turns to the south; the Juras no longer blacken its treacherous and sinister flood between their cliffs, but on the west the mountains of Ardèche advance, on the east the Alps; the stream is broad and swift, and studded with islands; its valley grows more and more luminous; at length, glowing colors appear: gray olive-trees, white rocks, old towns black or gilded, and castles of tragic history; we are in the south, on the very spot where in olden times the stream terminated; but this carrier of débris, aided by the Durance, has filled up all this gulf, and it is to-day a marvellously beautiful plain; the limpid Sorgues and the turbid Durance pour their floods into it, and there is not another plain in all France so well watered or so sunny. A little above Arles, a city with Roman remains, the stream divides; more than five-sixths of its waters flows to the east, through the Great Rhone; the Little Rhone carries the remainder to the west; at this bifurcation, the Rhone rolls on an average, according to various calculations, 60,000, 70,000, 75,000, or even 92,000 cubic feet per second, with a low-water flow of 19,420, and floods of at least 423,725. Between these two unequal branches lies the Camargue, the delta of the river, embracing 290 square miles of emerged and emerging mire, and mire still covered with water; and, at the extremity of all these incoherent masses, the struggle goes on between the stream, which flows down broad, majestic, and tawny, and the sea, which accepts or rejects, which triturates, displaces, and carries off the 742 million cubic feet of alluvium which the Rhone brings to it. From the putrefying ponds, from the dried-up sea-bottoms, from the reeds and rushes,

from the dunes and the bogs, the sun draws deadly effluvia for the scattered settlers of this amphibious realm.

Under the Romans, during the palmy days of the empire, Arles was only half as far from the sea as it is to-day; it is estimated that since then the Rhone has gained on the Mediterranean about 97 square miles, and that since it began to encroach on the briny waves, it has diminished them by at least 580 square miles.

The Rhone unites in its channel: the Arve;—the Ain, a superb river of the Juras, formed from springs in the rock, and dashing, cold and clear, from cluse to cluse, in rapids and cataracts; no large river-basin of France has so great a rainfall as



THE PONT DU GARD.

that of the Ain; the mean flow of the stream is 1750 cubic feet;—the Saône (283 miles), slow and majestic, issues from a hill of the Faucilles, and flows due south through the plain of Dijon, past Châlon and Macon; the exact reverse of the Rhone, it is scant in summer and strong in winter; it has been known to sink to 777 cubic feet per second, but its average is 15,254, and its extreme floods do not exceed 141,000. The waters which it brings down to the Rhone at Lyons include those of the Doubs, the great Jurassic river; and the Doubs carries those of the Loue. The extraordinarily tortuous Doubs runs 267 miles in a distance of 59 measured in a straight line from its source to its mouth. Considered as the head of the Saône, the latter would have a length of 385 miles; as the head of the Rhone, it would give the Rhone a length of 637; it contains the famous falls of the Doubs. Below Lyons the Rhone

receives the Isère (180 miles), a huge torrent rolling more than 3500 cubic feet per second in the scantest seasons;—the fluctuating Drôme;—the green Ardèche: as mighty whirlwinds strike the Tanargue, from which the Ardèche is fed, its freshets are unprecedented; it has been known to rise from 177 cubic feet per second to more than 282,000, a flow equalling that of the Loire in its wildest frenzy;—the Sorgues of Vaucluse;—the extraordinarily fluctuating Durance (236 miles), which gathering the swiftest torrents of the most desolate mountains, varies, according to the weather, from 1060 to 353,000 cubic feet per second, with a mean of 12,350;—and lastly, the Gard, or Gardon, a green flood with luminous gorges, and possessing a Roman aqueduct, such as Italy itself cannot exhibit.¹

Climate and Rainfall.—The climate of France is by no means uniform. Every valley, every ravine, and nearly every eminence has its own local climate. Except on the high plateaus or in the mountains, inhabited places are rare where the mean does not at least attain 48° to 50° F. The yearly average of Paris is 51°; Nancy la Lorraine has a mean of 49.1°; Limoges, 51.8°; Brest, 53°; Lyons, 53.2°; Nantes, 54.7°; Bordeaux, 56.3°; Marseilles, 57.2°; Perpignan, 59.9°; and Cannes, 61.5°, a temperature higher than that of Naples.

The annual rainfall is estimated at 30.3 inches, but this estimate is certainly much too low, as is being demonstrated by observations taken at the numerous meteorological stations recently established in the Alps, the Pyrenees, the French mountains, the Morvan, the Juras, and the Vosges. The distribution of this treasure of treasures is exceedingly unjust. The fall is hardly 15, 20, or 24 inches on many of the valleys in central France, or on many plains and low plateaus of the Paris Basin, or on many a great Causse of Lozère; while certain sea-shores receive 59 inches or more, as in Béarn, where it happens sometimes that twice as much water falls during the spring at Orthez as in all the four seasons at Paris, and while many a mountain attracts to itself a rainfall of 79 inches, like the Tanargue of Ardèche, or 98, like Mont Aigoual, and perhaps 118 or more, like certain of the Alps and the highest Pyrenees.

Admitting 30.3 inches to be the general mean, the clouds would pour annually 37 inches on the basin of the Rhone, 32 on that of the Gironde, and 24 on that of the Seine; now, to restrict ourselves to this last region, recent observations attribute to it 27. The same difference of estimates probably exists in the other basins.

The French.—Their Language.—At the dawn of history, Gaul, which then stretched from the mouths of the Rhine to the base of the Pyrenees, contained divers peoples: the north-east was occupied by the Cymri, men tall and fair; in the centre and west dwelt the Celts, who were short and thick-set, with black hair and black eyes; in the south-west were the Iberians; in the south-east, the Ligurians, who were also dark, and of low stature. The Cymri and Celts spoke two different dialects of a language which they had derived either directly from the ancestors of the race, or had adopted from a conquering people,—for it often happens that a nation proudly makes use of an idiom which was first imposed upon it by red-handed soldiers: the French, for example, owe their speech to a daring Roman general, and, in lesser measure, to German invaders, who wrought havoc in Gaul as others had done before them. Whether this language, which is still spoken in expiring dialects by something over three million men in France and the British Isles, whether this Celtic was the national idiom, or a language forced upon the nation, it belonged to the same family with Sanskrit, Greek, Latin, the Slavic tongues, and the Germanic. As for the Iberians, it is thought (though this

¹ The Pont du Gard.

remains to be proven) that they spoke, as perhaps also did the Ligurians, a language of which nothing now remains but the Eskuara of the Basques.

The Celts and Cymri united under the name of Gauls. Deep within them lived



FRENCH CHASSEURS.

the tribes, of divers descents, who, from age to age, on this eternal battlefield, had had their *gourbis* burned, their caves smoked out, their women carried off, and their men massacred. The French of to-day are therefore the descendants of primitive savages

as much as of those Gauls who so speedily adopted the Latin language, and sent to Rome rhetoricians and grammarians greedy for fortune.

The enslavement of Gaul came from the south. In the first glimmerings of occidental history, Phœnicians settled along the brilliantly lighted coast of Provence, which resembled their Syria; then the Greeks arrived on the same shores, and founded Marseilles; and later came the Romans. These last, under the command of Cæsar, in a few years gained possession of Gaul as far as the marshes of Flanders and the storm-beaten capes of Brittany. Then the Gauls abandoned their Celtic tongue and adopted the Latin. They nearly all understood Latin in Rome's declining days, when savage men of every complexion and every country entered Gaul, — Franks, Suevi, Goths, Vandals, Burgundians, Alans, Huns, etc. Later, the country absorbed Berbers and Arabs, English, Germans, Flemings and Walloons, Swiss, Italians, and Spaniards. And after all these mixtures by fire and sword, in times of peace the richness and beauty of the country attracted great multitudes from every neighboring land, and, in small numbers, men from all quarters of the inhabited world. The French, therefore, are greatly mixed, like other peoples; they have nothing to cement them together as a nation except the long experience of the same joys and the same griefs.

The French language, which originated in the popular Latin of Cæsar's time, and which was later modified by Teutonic mixtures and by various chance elements, is a sister of Italian, Spanish, Portuguese, and Roumanian. The fate of time made it the universal language read or spoken by all educated men throughout the world, especially in Europe and South America. But at the present moment English is menacing it in its universality; still, the close relationship of French to the other idioms descended from Rome will doubtless secure to it an important place among the Neo-Latins of Europe and America.

Outside of France it is spoken: —

In Europe: in the Anglo-Norman islands of Jersey, Guernsey, and Alderney; in Walloon Belgium, and, concurrently with Flemish, in Brussels and throughout Flanders *flamingante*; in a part of Alsace-Lorraine, and, along with German, in all the cities of this province; in western or French Switzerland; in certain high valleys of the Great Alps looking toward Italy, called the Piedmontese and the Vaudois valleys. It is the official language in Belgium, and, by the side of German, in the grand-duchy of Luxemburg.

In Africa: in Algeria and Tunis, in the islands of Bourbon and Mauritius, on certain coasts of Madagascar, and in the Seychelles.

In America: in French Canada, and, with a steadily growing influence, in numerous counties, once exclusively English, throughout the rest of the Dominion, — in New Brunswick, Nova Scotia, Prince Edward Island, the Province of Ontario, Manitoba, Assiniboia, Alberta, Athabasca, and Saskatchewan; — in New Orleans, and in different parishes of Louisiana; in Hayti; in the French Antilles, in several of the English Lesser Antilles; in certain districts of Cuba colonized by French from the south of France or from San Domingo; and in French Guiana.

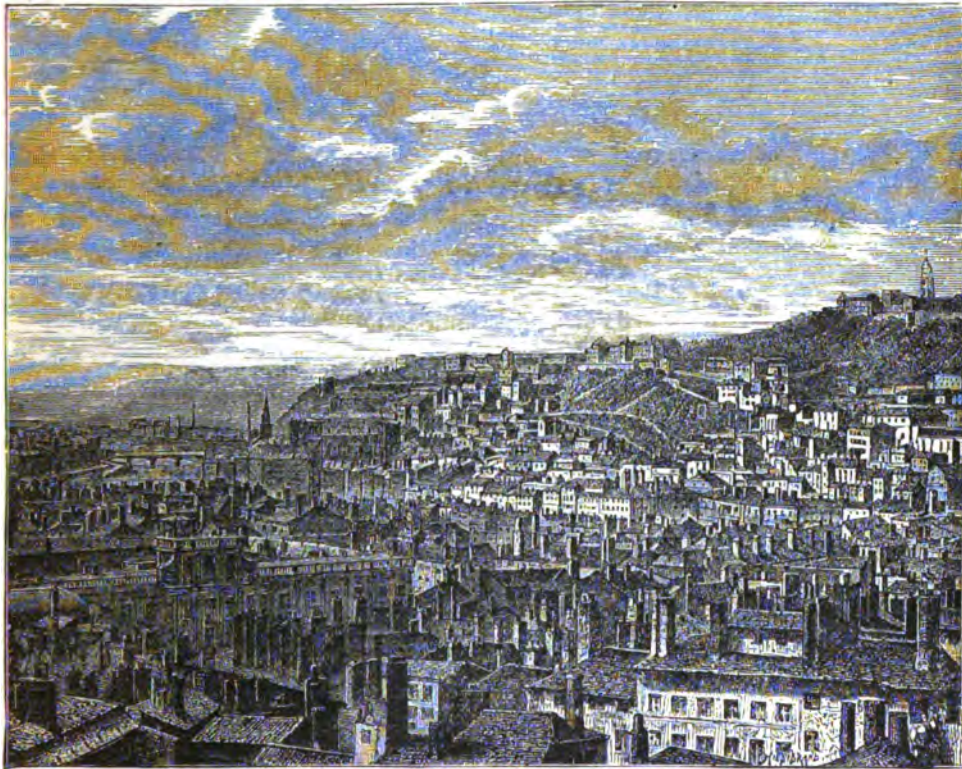
This enumeration does not include vast possessions in Africa and Asia where French rule has not been definitively established. Such are: in Asia, Cochin-China, Cambodia, Anam, and Tonquin; and in Africa, the Senegal-Niger and Gaboon-Congo regions and Madagascar.

In France there are about 150,000 to 200,000 Flemings, in Dunkirk and Haze-

brouck (Nord), about 1,100,000 to 1,230,000 Bretons in Côtes-du-Nord, Finistère, and Morbihan; and 120,000 Basques in the *arrondissements* of Bayonne and Mauléon (Basses Pyrénées); but nearly all these allophones now understand French, and their own languages are gradually but surely disappearing. The old *patois d'oc* of southern France is likewise becoming extinct, and yet this language was flexible, graceful, harmonious, and, as it were, gilded by the sun, until it was broken up into countless dialects, which were little by little weakened and Frenchized.

Cities. — France has twelve cities, with a population of over 100,000.

Paris, a walled town on the Seine, from 80 to 350 feet in altitude, contains



LYONS.

2,424,000 inhabitants, and at least 2,600,000 with the suburbs, which extend upstream for a long distance along the Marne and down-stream on the Seine as far as the Oise, or spread out over the hills as far as stately and empty Versailles. For more than two hundred years Paris has been an enormous city.¹ It is second to London alone in population; its industry and commerce are vast and varied, and men flock hither from all parts of the world as to the centre of the arts, luxuries, and pleasures. We pardon its exuberance, because it is gay by nature, and beautiful, and because Paris is Paris.

¹ Under Henry II., it already contained more than 200,000 souls, nearly 500,000 under Louis XIV., 650,000 at the dawn of the nineteenth century, more than a million in the second half of Louis Philippe's reign, 1,668,000, in 1861, after the annexation of the suburbs, 1,852,000 in 1872, and 1,988,000 in 1876.

The queen of silk-weaving cities, Lyons (430,000), occupies an imposing site on lofty hills at the confluence of the tumultuous Rhone with the peaceful Saône.

Marseilles (407,000) seems on the eve of superseding Lyons as second city of France. In its finest quarters, this superb town rivals Paris; the multitudes in its streets are as great as those of Paris, and they are of even a more motley character. And what Paris lacks constitutes the beauty of the "daughter of Phocæa," namely: bold and forceful scenery, brilliantly colored rocks, abundant sunlight, and the sea.



BORDEAUX.

Marseilles is the chief port of France, and the third in continental Europe, after Antwerp and Hamburg.

Bordeaux (252,000), likewise a magnificent town, lies along the muddy Garonne, in the form of a crescent, on the confines of Landes, near Médoc; the Garonne bears to it mighty ocean ships.

Lille (201,000), a colossal factory in the monotonous plain of Flanders, has so many cities and boroughs grouped about it that it is, on a small scale, like London, "a province covered with houses."

Toulouse (148,000) borders the Garonne, between the Pyrenees, and the Cévennes, and between the Atlantic and the Mediterranean, nearly in the centre of the Latin world, if we exclude Roumania.

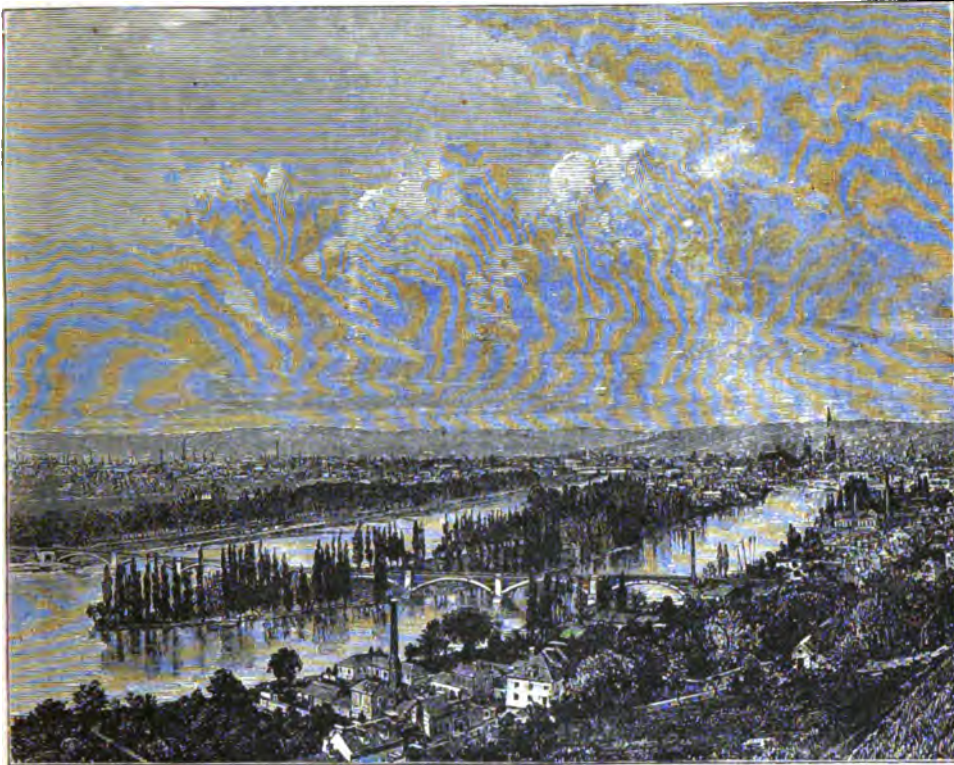
Nantes (121,000) has fine docks on the Loire.

Saint-Etienne-en-Forez (133,500) is by the last census gaining in population. It is

a coal city, — a city of forges and factories, situated at the base of the mountains, on the right bank of the Loire.

Rouen (110,000) grows but slowly; and yet it is finely located, in a rich and favored region. And the Seine is broad enough here to receive ships capable of braving the high seas.

Le Havre (116,000), on the contrary, is gaining. It is built at the mouth of the Seine; it is the port of Paris on the English Channel.



ROUEN.

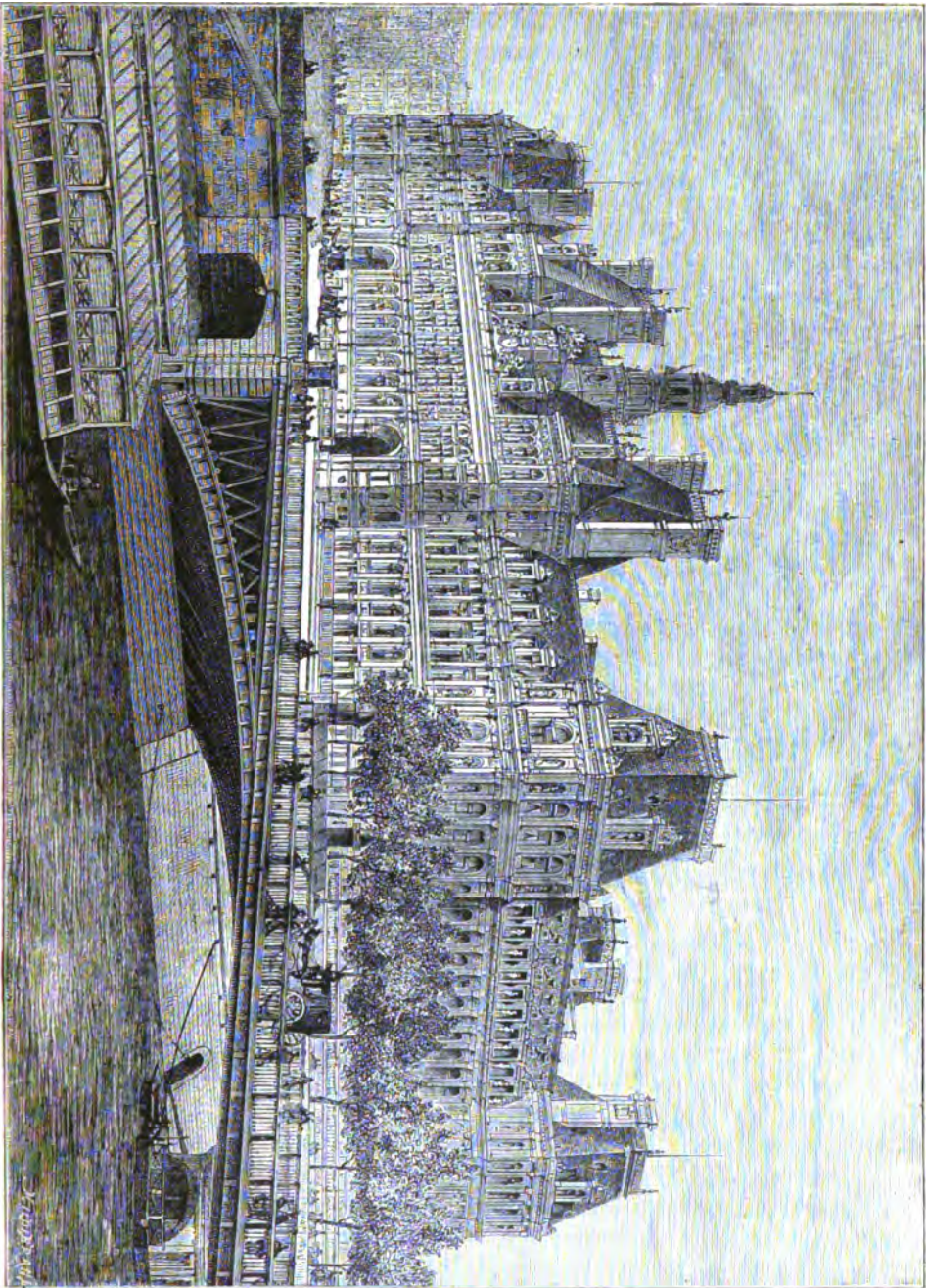
Then follow: Rheims (106,000), a manufacturing city on the Vesle, an affluent of the Aisne, on the borders of Champagne Pouilleuse; Roubaix (115,000), a collection of shops, near Lille, in the Flemish plain; Amiens (84,000), on the Somme, which possesses the queen of cathedrals: to build the masterpiece of churches one must have, according to the saying, "the spire of Chartres, the nave of Amiens, the choir of Beauvais, and the façade of Rheims"; Nancy (87,000), on the Meurthe, an affluent of the Moselle, the chief city of Lorraine in the past century; Toulon (78,000), on the Mediterranean, the port from which the fleet that conquered Algeria sailed: since that date it has become the chief naval station of France; Angers (73,000), once the capital of Anjou, on the Maine, and not far from the Loire; Nice (96,000), the largest and busiest of the winter-resorts on the Mediterranean; Brest (76,000), in Brittany, a formidably fortified city, on an ocean bay: this port would have ruled the waters if England had permitted it; Limoges (72,000), on the Vienne,

the old capital of Limousin: it has extensive porcelain manufactures; Nîmes (72,000), between the Cévennes, the Rhone, and the Mediterranean: under its clear skies, the centuries gild rather than decay the beautiful Roman remains of the city; Rennes (69,000), at the confluence of the Vilaine and the Ille, once the seat of the parliament of Brittany; Orléans (65,000), on the great bend of the Loire, is like a distant suburb of Paris, on the central river of France; Besançon (57,000), on the Doubs, was formerly the capital of Franche-Comté; Montpellier (70,000), under the same sky as Nîmes, has a near view of the Cévennes and the sea, and a distant glimpse of the eastern Pyrenees; Dijon (65,000), at the foot of the Côte d'Or, on the borders of the great plain of the Saône, was formerly the residence of the dukes of Burgundy, who rivalled the kings of France; Le Mans (58,000), the old capital of Maine, borders the Sarthe; Tours (62,000), on the Loire, formerly ruled Touraine, which has been named with extreme generosity the Garden of France; Tourcoing (65,000), a manufacturing city, in the Flemish plain, touches Roubaix as Roubaix does Lille; Grenoble (61,000), on the Isère, in one of the most favored regions of the world, was once the metropolis of Dauphiny; Versailles (53,000), on a plateau on the left bank of the Seine, contains a stately palace and magnificent gardens: it is like an Escorial of Paris, although less sombre than Madrid's.

Corsica. — France possesses a large island in the Mediterranean, 112 miles from her own shores, 286 from Algeria, and 55 or 56 from Italy. This island, called Corsica, is Italian in climate, race, and speech, but wholly French in sentiment. Corsica is crossed near the centre by the 42d parallel of latitude, which passes near Rome; it is 114 miles long, 52 wide in its broadest portion, and covers 3377 square miles. Its seaboard of about 300 miles is fringed with charming bays, several of which are among the finest in the world: such as the bays of Saint-Florent, Calvi, Porto, Sagone, Ajaccio, Valinco, Santa Mansa, and, the most beautiful of all, the admirably sheltered Porto Vecchio. These superb harbors, capable, at need, of receiving the most powerful armadas, indent the northern coast, the red granites of the western, and the southern; but, in strong contrast to these shores, the eastern extends in a straight line from Bastia almost to Porto Vecchio, with no gulfs nor bays, but with ponds and the channels of extravasated rivers. The beach, which is formed by the rivers, is 50 miles long, with a width of 5 to 7 or 10; it vies in unhealthfulness with the much larger and much less beautiful island of Sardinia. Sardinia, which is separated from Corsica by the Strait of Bonifacio (7 miles broad), contains no tracts more feverish than the Corsican marshes of Aleria; and yet this infected village, near the Etang de Diane and the mouth of the river Tavignano, was the capital of the island under the Romans.

Fleeing from the pestilential atmosphere rather than from the Barbary pirates, the Corsicans of the sixteenth, seventeenth, and eighteenth centuries abandoned this ill-fated shore; they cultivated a few patches of ground and pastured their flocks here, but they had their dwellings back from the coast, in villages perched high on the rocks, and guaranteed against the malaria by mountain-spurs and woods, and by those immense chestnut groves which were the strongholds of Corsican independence; the herdsmen and the husbandmen dare not descend again to live near the sea; though the corsair has disappeared, the poisonous air remains.

From the bays on the shore we climb to peaks and domes, along turbulent torrents bearing sonorous names, such as Aliso, Fango, Sagone, Liamone, Gravone, Prunelli, Taravo, Tavarica or Rezzanese, Travo, Fiumorbo, and Tavignano. We reach the



THE HOTEL DE VILLE, PARIS.

crests sometimes by *maquis*, or thickets of odoriferous shrubs, sometimes through open, naked spaces, sometimes by extensive woods; the deepest of these are the forests of Aitone, of Valdoniello, of Vizzavona, and of Bavello, composed of beeches, oaks, and, more especially, of Corsican pines, Sea-pines, and firs.

The peaks which rear their hoary heads above these woods are of proud mien. The loftiest is Monte Cinto (8881 feet); Monte Rotondo, which was long considered the culminating summit, ranks second, with an elevation of 8612 feet.

In the midst of this bold nature lives and moves a vigorous, powerful, obstinate, vindictive, passionate, prolific race. About 276,000 Corsicans occupy these 3377 square miles; that is, 82 persons to the square mile. The nation has grown since it became peaceable, notwithstanding large emigrations to France, Algeria, and Latin America. The Corsicans of to-day are united, but formerly every valley armed its own little people against another valley, glen, or ravine; every little town had its hostile families, and even in the most tottering hamlet the inhabitants massacred each other, in accordance with a long established custom, to satisfy their inveterate hates, — a vendetta, which each fresh murder perpetuated. All the southern peoples have revelled here in an orgy of blood and destruction, — unknown aborigines, Phœnicians, Carthaginians, Greeks, Romans, Arabs and Berbers, Italians, Catalans, and southern French: but unity has been accomplished, and the Corsican now is Corsican.

This marvellous island has gained 100,000 souls or more since the beginning of the century. It is destined to have a million inhabitants; but the thick shade, of which it has been stripped, and the water which flowed from its old forest must be restored; although still very green and without a single ruined mountain, Corsica has lost vast groves; too many of its woods have given place to thickets, and the thickets are becoming vineyards.

The capital, Ajaccio (pop. 18,000), on one of the western gulfs, is not as large as Bastia (20,000), which faces the Italian seaboard from the eastern shore at the northern extremity of the island.

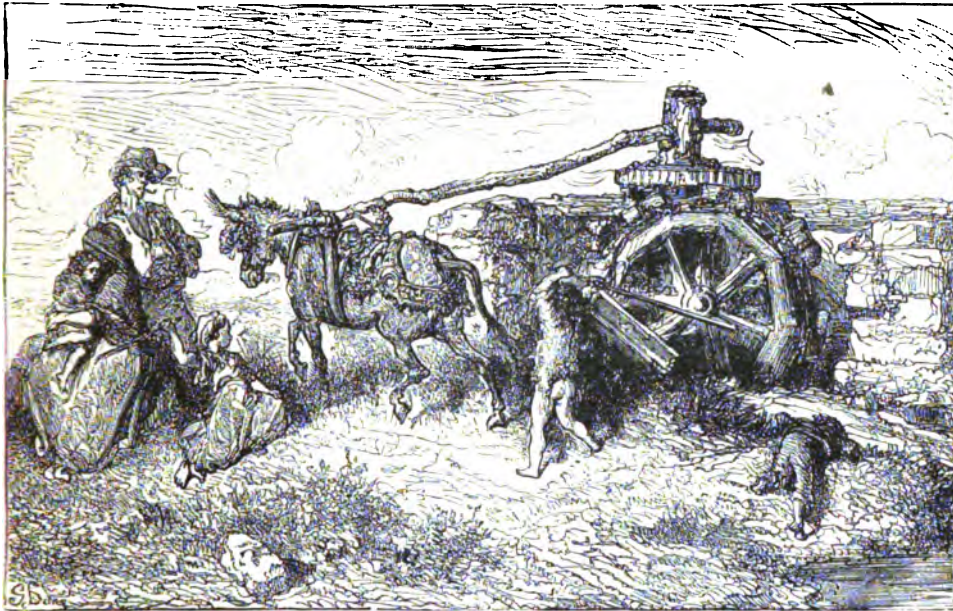
SPAIN.

The Iberian Peninsula. — Strait of Gibraltar. — The Iberian peninsula, comprising Spain and Portugal, has an area of about 225,000 square miles, with a population of 21½ million. Spain's portion embraces about 192,000 square miles,¹ and 17,263,000 inhabitants, — 17,550,000 including the Canary Islands, which face the southern shore of Morocco, at the gates of the Desert of Sahara. Spain, then, has only 88 inhabitants to the square mile; unfortunately, she possesses vast plains cut off from the moist winds, and in a harsh climate, which latitude and altitude make torrid and glacial in turn. These high plateaus give the Iberian peninsula a mean elevation of 2300 feet. In this respect Iberia ranks below Switzerland alone; but much below, for the latter has an average altitude of 4265 feet.

The Strait of Gibraltar, with a breadth of scarcely 8 miles in the narrowest part,

¹ These figures include the Balearic Islands. Continental Spain comprises 191,100 square miles. With the Balearic and Canary Islands and the small strip of territory in North Africa, the area is 197,767 square miles. The last general enumeration (1887) returned a total legal population of 17,550,246. — *Ed.*

between Punta de Canales and Punta Cires, opens from the Atlantic into the Mediterranean, and at the same time separates Spain from Morocco, Europe from Africa. It gives passage to the current without which the Mediterranean, partially drying up, would become a series of lakes. The Bosphorus (which carries the waters of the Don, the Dnieper, the Dniester, and the Danube), the Nile, the Po, the Rhone, the Ebro, the Jucar, the affluents and affluentics contributed by the Caucasus, Asia Minor, Turkey, Greece, Italy, France, Spain, and northern Africa, in vain pour their mighty fresh-water floods into the urn of the Mediterranean; three times as great an amount is carried off by evaporation from the sea which stretches from the rock



A NORIA.

where Prometheus writhed to the mountains sundered by Hercules; but, through the Strait of Gibraltar (3018 feet deep), the "Father of Waters" re-establishes the equilibrium.

Spain is, then, severed from Africa, on the south, by the Strait of Gibraltar; on the north, the sharp peaks of the Pyrenees separate it from France. Everywhere else the sea is at its gates, except on the wholly artificial Portuguese frontier; Spain possesses 1320 miles of coast-line, 714 of which extend along the Mediterranean; the rest is on the ocean.

It has been said that Europe terminates with the Pyrenees rather than with the Strait of Gibraltar; Spain bears a stronger resemblance to the Tell of the Atlas Mountains than to France; we find here the same brazen wastes far from running waters, the same trees in valley, steppe, and mountain, and the same withering, blistering heat; but where the land is well watered the burning sky smiles on gardens enchanting as Armida's.

Spain is less a compact nation than an assemblage of peoples with a common origin, and separated from each other by a species of deserts, or by lofty sierras

whose *puertos* or high cols are obstructed by snow during 4 to 6 months of the year.

Central Plateau: the Castiles, La Mancha, Estremadura. — The centre, comprising almost a half of the peninsula, belongs to the plateau of Castile and Leon, a double plateau divided by the Sierra de Guadarrama (7891 feet) into the plateau of Old Castile and Leon and the plateau of New Castile, La Mancha and Estremadura.

The plateau of Old Castile, on the north-west, with an altitude of 1870 to 4600 feet, extends along both banks of the Douro, a stream draining a basin of 36,680 square miles, in which are situated three of Spain's most celebrated cities. One of these, Burgos, boasts of her cathedral, but glories most in her souvenirs of that great slayer of the Moors, the conqueror of Valencia, the Cid, *El Campeador*, who defeated the Mussulmans a hundred times. Many illustrious warriors took part in the seven or eight hundred years of strife, which began near the Bay of Biscay, and ended with the fall of Granada, near the Mediterranean, and opposite Africa; but, of all the *hidalgos* who fought the Moors, the most famous by far was the Cid, the hero of popular romance. Of the other renowned cities of this plateau, Valladolid was once the capital of Spain, and Salamanca is the seat of the national university.

The Douro (506 miles) descends from the rugged, snow-capped Pico de Urbion (7389 feet) into the region where Numantia formerly stood, a town famous for the memorable siege by the Romans under Scipio Africanus the younger. Reaching the plain 7 to 9 miles south-west of Valladolid, which bears an Arabic name (*Blad Oualid*, the "city of Oualid"), it receives the Pisuerga and the Adaja, thus doubling its volume; the flow is scant, however, for the plateaus on which the stream winds are but little visited by the rain. The Pisuerga, which comes from the Cantabrian Pyrenees on the north, is the river of Valladolid; the Adaja comes from the south, from mountains connected with the Sierra de Gredos and the Sierra de Guadarrama; it passes Avila, a chill town lying in a valley which is skirted by the railroad from Irun to Madrid, before it reaches the long tunnels of the Sierra de Guadarrama; its affluent, the Eresma, flows by monumental Segovia, one of the most delightful spots in Spain. Below Zamora (another Arab, or rather Berber name), the Douro is augmented by the Esla, a charming river formed from a fan-shaped group of torrents, one of which bathes old Leon; this wretched, melancholy town, of less than 12,000 inhabitants, gave its name to one of the two kingdoms which were absorbed in the Madrilénian monarchy. Near its confluence with the Esla, the stream, which has become a boundary line between Spain and Portugal, descends into a deep, narrow, tortuous passage, the left wall of which opens to give entrance, first to the limpid Tormes, from the Sierra de Gredos (8730 feet), and then to the Agueda, a torrent as transparent as the Tormes and not less celebrated by Spanish poets.

The plateau of New Castile is a little less elevated than the preceding; it occupies the central portion of the peninsula, between the Sierra de Guadarrama and the Sierra Morena. It supports the Mountains of Toledo and the Sierra de Guadalupe (5112 feet), which cut it into two nearly equal plateaus, on the north the plateau of the Tagus, on the south the plateau of the Guadiana (comprising La Mancha and Estremadura). As the interior of Spain derives its rains from the Atlantic much more than from the Mediterranean, the dryness augments and the rivers diminish in size and number in measure as the distance from the ocean increases; the basin of the Douro, with no barrier between it and the Atlantic, except the Pyrenees of Asturias and Galicia, has a mean annual rainfall of 20 inches; it has, therefore, greater rios

than the Tagus basin; on the other hand, this latter basin, which receives annually an average of 16 inches of rain, has more running water than that of the Guadiana, where, at the most, the fall is not more than 14 inches; and, on the whole, the three streams are very scant.

These plateaus of central Spain are melancholy and almost hideous; they consist of gray *campos*,¹ which are rich in grains, but almost treeless, of waterless ravines, and of steppes where flocks of merinos browse. At rare intervals a village may be seen, in the midst of the stubble-fields of the plain, or among the pebbles on the hill-slopes, — villages of dilapidated and apparently deserted houses. Along the horizon stretch naked sierras seamed by mediocre torrents. In winter the plateaus are covered with snow and mud; in summer, dust whirls over them, under a leaden sky. Violent winds blow the year round over the grain-fields and over these mountains and naked *páramos*,² of which the Spanish proverb says, "The lark carries her beak full when she sets out to travel in Castile." Who would think that five hundred years ago the two plateaus were one long forest of pines and oaks through which roamed shaggy bears, squat boars, and graceful stags?

The interminable warfare against the Moors, and the massacre or expulsion of the conquered Mohammedans; the gaps made in the population after the discovery of America, and the conquest of Mexico and Peru by two Estremadurans, whose great fortune attracted thousands of men beyond the seas; the ravages of the migratory merinos, which, under the patronage of the huge monopoly known as the Mesta,³ shaved the country twice each year, first on their passage from the southern plains to the mountains of Leon, and again on their return to the warm plains, — all this depopulated vast districts in middle Spain. The irrigating canals either burst or filled up, the *norias*, or draw-wells, ceased to turn, the fields ran to waste, and little by little the fallow lands and pasture grounds, ravaged by goat and sheep, became *despoblados*.⁴ Another and great cause of the hideousness of so many of the central campos is the hatred which the peasants have for trees. The Spaniard abhors forests and groves, because the birds suspend their nests in them, and gayly plunder his grain-fields. *Arbol, pájaro*, "Tree, bird!" he exclaims, and he cuts down the tree. Moreover, a part of this country belongs to non-resident proprietors, who take no care of their vast *estados*.

South-east of the Castilian plateau extends the desolate plain of La Mancha, not one of whose brackish streams is capable of running a shop; and this region, which is exceedingly rich in grains in wet years, has been obliged to have recourse to the wind-mills which Don Quixote attacked. Gazing on the aridity of this Spanish country, under the oppression falling from heaven in rays and rising from the soil by reflection, one understands the passion for running water expressed in all the poems of the Orient, from the Castilian romance to the Hebrew Psalms and the Song of Songs. He who has never walked over a glistening road in the burning air of the campos cannot comprehend the cry of the poet, "O fountain of gardens, O well of living waters, O streams from Lebanon!"

The two rivers of the plateau of New Castile are the Tagus (in Spanish, *Tajo*) and the Guadiana. The Tagus (556 miles) drains a basin of 31,855 square miles. It

¹ Plains

² High, cold plains.

³ A term applied to the great sheep-proprietors of Spain, who are granted the privilege of conducting their sheep into different provinces for the sake of pasturage. — ED.

⁴ Depopulated regions.

laves the proud rock of a former capital of Spain, Toledo. This monumental city is at once Arabic and Spanish, monastic and warlike, — a precious historic museum, but a dismal and lifeless town. Both above and below Toledo it is rare that the Tagus flows between the "flowery banks" of old romances; it twists through tortuous ravines, and winds through arid fields which are red with dust in summer. Nothing can be seen from its waters but perpendicular rocks, treeless heaps of stone, scorched grass, and withered shrubs. Below Puente del Arzobispo its valley becomes what the Spaniards call a *cañon*; that is, a deep constriction. As we approach Portugal the defile deepens and contracts, the rocks are more nearly vertical, and we could almost clear the river at a bound; and yet it expands into a lake some dozens of leagues farther down, and forms for Lisbon one of the finest harbors in the world. Its course is broken by rapids and small cataracts. The Salto del Gitano is a fall of 26 feet; the river at this point is 131 feet broad. The Tagus carries gold-dust in its floods, and the ancients used to cite it with the Pactolus, the auriferous Hermus, and the Ganges.

On Spanish territory the Tagus receives the Jarama, the Alberche, the Tietar, and the Alagon. The Jarama joins the Tagus on the margin of the park of Aranjuez, a royal residence: it unites in its channel the Lozoya, which furnishes Madrid with a canal, without which the city would have no cool water in summer; the Henares, on which Alcalá, the birthplace of the prince of Castilian writers,¹ is situated; and the Manzanares, over whose sterile valley the queen of the Spains gazes. The Alberche flows around the Sierra de Gredos; the Tietar skirts this lofty chain on the south; the limpid Alagon unites the waters of the Batuecas and the Hurdes, — jagged cirques, which are inhabited by families of genuine savages. These small, ugly, wan beings, clad in skins or indecent rags, live, it is said, in filthy dens hollowed out of the earth, in company with asses and goats; they sleep on beds of heather, they herd together promiscuously, knowing neither priests, judges, laws, nor traditions, and possessing little in common with the rest of the Spaniards, except the payment of the imposts. These poor wretches have passed into a proverb, and the Spaniards characterize a coarse person as one who has been *criado en las Batuecas*, "brought up in the Batuecas."

Below the mouth of the Alagon, the Tagus passes under the six arches of a bridge which is almost unrivalled in the world. The bridge of Alcantara has come down to us from the hands of Trajan, a Roman emperor of Spanish origin; it is now more than 1750 years old. Its central tower overlooks the Tagus at an elevation of 197 feet; as the storms and snow-waters of the plateau have no other path to the sea than this narrow gorge in the rock, the stream rises here as the Rhine does in the Via Mala (more than 130 feet in great floods).

The Guadiana (510 miles as far as the source of the remotest affluent) is bordered by miasmatic tracts; its catchment basin embraces 25,100 square miles. It has its sources at an altitude of 1995 feet in La Mancha, in the Ojos of Guadiana, — springs which together supply 106 cubic feet of water per second. Ojos means eyes; in the same way the Arabic *ain* signifies both eye and fountain. These Ojos are doubtless the reappearance of a river which terminates higher up in swamps. They pour into the Guadiana nearly all its summer flow; for, in the hot season, its affluents, some of which are very long, bring it no running water. One of them, the scant and filthy Zujar, comes from Almaden, the quicksilver city. In Estremadura, the Guadiana

¹ Cervantes.

winds around the hill of Medellin, where the Mexican conqueror Cortes was born. Below Merida, a city which boasts of the ruins of its Roman aqueduct, and its bridge of 81 arches, constructed under Trajan, the stream bathes the Spanish fortress of Badajoz. At the lower extremity of its plain, this citadel faces Elvas, a Portuguese fortified town perched on a neighboring hill. In Portugal, the Guadiana twists between Serpa and Mertola, in a channel through naked rock, and flows turbulently over the crags of the Wolf Falls (Spanish, *Salto del Lobo*; Portuguese, *Pulo do Lobo*).

The Castilians inhabit these central plateaus, around which four other regions radiate, to say nothing of a fifth, which forms Portugal. On the north are the Cantabrian and the Ebro districts, on the east the country of Valencia and Murcia, and on the south Andalusia.

Cantabria: The Basque Country, Asturias, Galicia — The Cantabrian Mountains, bordering Old Castile and Leon on the south and the Bay of Biscay on the north, prolong the Pyrenees to the west, and sometimes shoot up to almost as great heights as the Pyrenees themselves. Torrents leap down from their crests to the whitening waves through tortuous valleys; not the turbid, sluggish, melancholy streams of the Central Plateau, but clear, cold, swift, noisy currents, which reach their cataracts with floods drawn sometimes from the rock, sometimes from the snows, and often from the forest. This narrow district, in a moist and temperate climate, is cultivated and peopled. It might be called European Spain; it comprises, from east to west, the Basque provinces, Asturias, and Galicia, and the last remnants of the mighty forests which once covered Spain are seen here. There still remains in old Iberia (not including Portugal) 27,000 square miles of wooded land; but, of this, less than 11,600 consists of genuine forests, or *monte alto*, according to the Spanish term; the rest is *monte bajo*, or thickets in every way similar to those of Corsica and the Tell.

The Basque lands have preserved until recent years a part of the *fueros*, or rights and privileges, granted in ancient times, when the people voluntarily allied themselves with the allophones and allophytes of Spain. In Guipuzcoa, in three-quarters of Biscay, in a half of Navarre, and in a very small corner of Alava, dwell the Basques, supposed descendants of the Iberians, though we have no certain proofs of this relationship. They are handsome-featured, of fine physique, graceful, lithe, and strong, gay and independent, numbering a half-million mountaineers and coast men, or not over 450,000. They call themselves Escualdunacs in their ancient *Escuara*, which is retreating before the advance of Spanish; the latter language is gradually getting possession of the towns and ascending the valleys from the sea or from the river Ebro. In the time of its complete freedom, "this little people that dances on the top of the Pyrenees" did not deign to rear stone edifices for its provincial parliaments: the ancient inhabitants of Biscay assembled under an oak; the people of Alava and those of Guipuzcoa likewise gathered under a tree, and in its shade they swore to defend forever the independence of the Escualdunacs. The most celebrated of these trees, the oak of Guernica, in Biscay, died of old age in 1811. This was a shoot from another national tree; for from time immemorial the mandataries of the Vizcaynos (Biscayans) came "to take oath" under the oak of Guernica.

What fate but death can await this feeble nation cut into two fragments, one in Spain, the other and smaller one in France, with a railway across its territory, pressed upon on the south by sixteen million Spaniards, and on the north by forty million French, and bled by an ever increasing emigration toward South America? The

Escuarophones certainly do not number a million, and they, perhaps, scarcely exceed 800,000; there are possibly 200,000 scattered over America, 400,000 or 500,000 concentrated in Spain, and 120,000 in France. When these graceful, shrewd men disappear, they will leave behind them only a feeble memory. Their language is superb, isolated, and unique, though possessing a vague glimmer of resemblance to divers agglutinative idioms, such as the Algonkin, Mexican, Quichua, Aymara, etc.; this suggestion of relationship comes solely, however, from the agglutinative or agglomerative nature of the Escuara; in other respects the Basque differs as widely as possible from all these Indian languages.

No great work has been produced in this magnificent tongue. It seems as though so ancient a people as the Escualdunacs ought to have left us some treasures of antiquity, but they bring us neither rites, nor myths, nor chants, nor legends; no epic tells us whether they come from the north, south, or east; no tradition recounts what they accomplished, what they attempted, what they suffered in those olden times. No one knows whether this was once a great people spreading over the south of Europe and north of Africa, or whether, as some are beginning to believe, it was never anything but an obscure tribe, jealously guarding the mountain-passes, but never descending as victors or vanquished to unite its destinies with those of the other peoples. A few religious books and catechisms, certain translations from Latin, Spanish, or French, a few trifling songs, constitute all the works of the Basque genius; and yet these vanquishers of Roland, prefect of the marches of Brittany, have been a heroic race ever since their appearance on the threshold of history! What people of equal numbers has given more daring seamen to the world, more adventurers, or more conquistadores? What one can be named that has spilt more of its blood for liberty?

West of the Basque provinces, along a beautiful coast, and in a labyrinth of gorges, at the foot of a superb pile of sierras, dwell the noble Asturians, who are proud of inhabiting the only Spanish mountains which the soldiers of the *djehad*¹ never succeeded in subjecting to the law of Mahomet.

The Peñas de Europa are the highest of the Asturian mountains; one of them has an elevation of 8744 feet, an elevation which ranks this chain third among the Spanish sierras, after the Sierra Nevada and the Pyrenees. The fourth place belongs to the Sierra de Gredos, which rises, between the gorges of the Tagus and the plain of Medina del Campo, to an altitude of 8730 feet; the loftiest rocks, which bear the sonorous names of Los Hermanillos de Gredos and La Plaza del Moro Almanzor, are capped with snow nearly all the year. Extraordinarily stately names abound everywhere in Spain: a chain near Soria is called La Sierra de los Siete Infantes de Lara; a mountain near Granada bears the title of El Ultimo Suspiro del Moro;² a little market-town is named Peñaranda de Bracamonte; a rivulet which disappears under a stone is the Rio Grande de las Aguas Claras; and the brook of Madrid is called Manzanares.

Galiccia, lying west of Asturias, is rainy, fringed with bays, and rich in fine harbors; it is the Spanish Brittany, but a Brittany with mountains instead of hills. The French Brittany has only scattered cities, and even very few market-towns; the Armorican of the coast lives in a little port or fishing hamlet; the Armorican of the interior whiles away his days in some sleepy village, built around a modest chapel. So in Galiccia. The Aragonese, Catalans, Valencians, Manchegos,³ Andalusians, Estremeños,⁴ Castil-

¹ The holy war.

² The last sigh of the Moor: from the tears which, it is said, King Boabdil shed when he cast a last glance on Granada, which had just been wrested from Islam by "the most Catholic nation."

³ Inhabitants of La Mancha.

⁴ Estremadurans.



THE PASS OF DESPEÑAPERROS.

ians, a great part of the Leonese, — almost all the Spaniards live in small market-towns, villages, and cities, many of which still preserve the walls erected in ancient days against the Moor; in Galicia, on the contrary (and also in Asturias, the Basque provinces, and many districts in the Kingdom of Leon), the peasant does not imprison himself in cities; he dwells on his farm, in the shadow of an oak, a walnut-tree, or chestnut-tree, or in a small hamlet. This corner of Iberia has, therefore, less unoccupied land, and it is gayer and busier than the rest of the Kingdom of the Spains.

The stream of Galicia is the Minho, whose parent branch is the Sil, a savage, winding, steep-banked river; it pierces the Monte Furado,¹ or rather it flows into the entrails of this mountain through a tunnel which looks as though it were made by the hand of man, and which was, perhaps, bored by Roman miners. Unlike the other great rios of Spain, the Minho resembles the currents of temperate Europe: owing to the 47 inches of rain which falls yearly on this part of Spain, it rolls on an average 17,500 cubic feet, the tribute of 9653 square miles; its course from the source of the Sil to the mouth of the Minho is a little over 200 miles. The Galicians, or Gallegos, emigrate to all the Iberian cities as laborers, water-porters, reapers, and keepers of cook-shops; they are found by thousands in Madrid, Oporto, and Lisbon. Neither do they fear to cross the waters, and there are many families of Galician origin in South America; it is to the Gallegos especially that people attribute — though with no good reason — the founding of the valiant little nation of the Costa-Ricans, in Central America.

The Ebro region: Aragon and Catalonia. — The basin of the Ebro lies between the Central Plateau and the Pyrenees. The Ebro is a tributary of the Mediterranean, and owes little to the mountains on the rim of the plateau; its summer waters descend from the Pyrenees: "The Ega, the Arga, and the Aragon make the Ebro a personage," says a proverb; we must add to these the Gallego and the Segre, — the latter doubled by the Cinca — which gather all the torrents rising in the silvery-topped sierras whose reverse slope cradles the Gaves, the Nestes, the Garonne, the Salat, and the Ariège. A large canal for irrigation and navigation, the Imperial Canal (494 cu. ft. per second), has been drawn from the stream at Tudela; much more can be demanded of the Ebro, especially from its great Pyrenean "vassals," and freshness may thus be restored to plains stretching under brazen skies. The Ebro begins in the greenish springs of Fontibre, at the foot of limestone hills, 2799 feet above sea-level. It is not 30 miles in a straight line from these fountains to the Atlantic, and no extraordinary obstacle separates them from the ocean; on the contrary, a canal of 6500 feet in a cut less than 70 feet deep would throw the Ebro into the valley of the Besaya, one of the coast rios, but the stream prefers to descend to the Mediterranean by a path 450 miles long, in a basin of more than 38,000 square miles. The only city of great renown on its banks is Saragossa (*Zaragoza*), the old capital of Aragon. Above Tortosa it pierces the mountains which once supported the lake under which lay the Aragonese plain; down-stream it enters a delta of 150 square miles, which would enlarge more rapidly if the major part of the waters of the basin were not confiscated for irrigation. And on account of these irrigations the Ebro carries to the Mediterranean only a half of its waters — 3500 cubic feet per second on the average (1750 at low water, 175,000 in the floods); — it is predicted that the entire volume of the stream will one day be emptied into the campos. If we can believe tradition, the Ebro and the Guadalquivir were the only Spanish rivers that withstood a terrible drought which burned up the country for twenty-six years after the year 1000.

¹ Bored mountain.

Aragon, facing the middle course of the Ebro, is a hot, sterile, empty land. The energetic and frugal Aragonese prefer contrabandage to working in the fields; with the torrents which the Pyrenees send down to them, they might easily transform their dusty plains into a garden of 13,500 square miles, but the entire country is simply a steppe where the campos possess all the hideous aridity of La Mancha.

Catalonia lies on the French frontier; it extends along the lower Ebro and northward on the Mediterranean to Cape Creux. Every part of the plains, valleys, shores, and mountain-bases that can be cultivated or watered has been converted into orchards; the rest consists of dreary deserts and torrent-gorges. In the Middle Ages the Catalans disputed the commerce with the Italians on all the coasts of the western Mediterranean; to-day they are the most industrious of the Spaniards, a truth recognized by the saying, *Los Catalanes de las piedras sacan panes* — "The Catalans pluck bread from the stones." Wherever they emigrate, — and they emigrate everywhere, — they either die or make a fortune, and the Spanish proverb, "Close-fisted life, good testament," is especially applicable to them. They make use of an idiom which resembles Spanish less closely than it does the *patois* of the south of France. They have their traditions, their national poets, their literary contests, their reviews, and their theatres. They do not call themselves Spaniards, but Catalans.

The Balearic Islands. — The Balearic Islands, which lie in the Mediterranean, and which have shared the fortunes of Spain, are likewise Catalan. The first of their masters whom history mentions were barbarians of unknown race; whether Celts, Iberians, or Celtiberians, is uncertain, but these savages were more formidable with their slings than other peoples with bows and arrows; it was to the unerring skill of these pebble-hurlers, so it has been said, that the two large islands on the north owed their name of *Baleares*, from the Greek βάλλειν, to throw, to dart; the two islands on the south-west were called the *Pityusæ*, from another Greek word, πινυς, pine, and one of them, Iviça, still has pine woods on its rocky hills.

Phœnicians, Carthaginians, Romans, Vandals, Goths, and Arabs followed one another here; the Romans garrisoned the islands for exactly 500 years; the Arabs, or, more correctly speaking, the Islamized Berbers, ruled over them 450 years. What remains of the Roman or the Berber in the nation now peopling these lands? No one can tell, but it may have been deeply penetrated by both elements. The Aragonese, who spoke Catalan at the time, wrested the archipelago from the Mussulmans, and at last Spain became mistress of it, but she has never bent the inhabitants to Spanish customs. The Majorcans, Minorcans, and Iviçans remain faithful to their Catalan tongue, which has been less corrupted than the Catalan of the mainland. It is still taught in the schools by the side of Castilian, and it is heard oftener from the pulpit than Spanish is.

The archipelago embraces 1860 square miles, and contains 313,000 inhabitants. It is cut by the 39th and 40th parallels of latitude, and lies in a warm sea, about 185 miles from Algeria; it is assailed by only one enemy, the north wind, which is implacable in Minorca, but less terrible in Majorca, where a mountain-chain affords a protection to the island. In Minorca, the orange ripens in valleys shielded from the violent blasts, but on the open plains and the unsheltered plateaus the gales from the north twist the Aleppo pines, dwarf the trees to shrubs, and bend the few trunks which they permit to grow to the south or south-west. There are even deep valleys,

running in a northerly and southerly direction, where the orange-tree does not thrive except in the shelter of thick curtains of laurels.

Majorca alone covers more than 1275 square miles; its area justifies its name, which is obtained from the Latin *major*, as Minorca is from *minor*. Viewed from its highest summit, the *puig* of Torellas (5154 feet), the island is seen to comprise one ridge of mountains and a broad, mammillated plain. The very beautiful mountain range lies along the north-west shore, close to the water's edge, like a small Andes on a Liliputian America; the old forests are wanting, but it has woods of wild olive-trees, green oaks, and Aleppo pines. The plain is fertile, very carefully cultivated, rich in fruits, and well peopled. The climate is charming; but there are no rios, and the stones in the channels of the brooks are seldom all covered by the water.

Minorca, less productive than Majorca, embraces 300 square miles; it has one small mountain of 1207 feet. Iviça, comprising 220 square miles, supplies the other islands of the group with the wood cut on its sierras (scarcely 1300 feet high). Formentera (Wheat Island) embraces less than 40 square miles.

Palma, the capital of the Baleares, a delightful resort, numbers nearly 60,500 souls. Mahon, in Minorca, has less than 20,000 inhabitants, but it possesses a safe, well sheltered, deep *ria*: "June, July, August, and Port Mahon," said Andrea Doria, "are the best Mediterranean harbors." Mahon and its island furnish so many settlers to French Africa that the time is approaching when there will be more Minorcan blood in Algeria than in Minorca itself.

Valencia and Murcia.—On the shores of the dazzling Mediterranean, south of Catalonia and east of the plateau, Valencia, where Catalan is still spoken, and Murcia, where Castilian is the language, form, with Andalusia, a Spanish Africa, dry and serene; here is the famous town of Elche, whose thirty to thirty-five thousand date-trees are the pride of the Spaniards; these palm-plantations are watered by canals running from a *pantano* (reservoir), formed by damming up the small coast-stream of Vinalopó; the trees, which grow to the height of 60 feet, supply the Catholics of Italy and Spain with palms for their processions. All the palms of Elche, and all those of Spain, descend, it is said, from a tree of Damascus, planted by Abd-er-Rahman, in a court-yard of his favorite palace, near Cordova, in memory of the city in the Orient where his childhood had been spent, and which he regretted even in Andalusia.

In all this region irrigation accomplishes marvels; by the side of *campos secanos*, or burnt, arid, tawny, dead lands, fruitfulness, freshness, and life glow in the *huertas*, or watered fields, which are market-gardens, fruit-gardens, rice and grain fields, vineyards, mulberry-plantations, and olive-orchards; the lands called lands *de regadio*¹ produce from 10 to 157 times as much as the *secanos*. The Turia, or Guadalaviar (180 miles), which yields 350 cubic feet per second in low water, and the Jucar (318 miles), which supplies from 847 to 1130, irrigate the huerta of Valencia; the huerta of Murcia and Orihuela owes its luxuriance to the canals from the Segura (217 miles), which carries at low water from 280 to 350 cubic feet. This last rio receives the Mundo and the Sangonera. Where rivers like the Turia, the Jucar, and the Segura are lacking, dams are constructed for the storage of the waters from storms; such, for example, was the dike, nearly 400 feet high, on the Sangonera, built for watering the valley of Lorca; it burst in 1802, causing frightful havoc. Except for this gap, the huge wall is still standing.

¹ Of irrigation.

Andalusia. — The Sierra Nevada range attains a greater elevation than the Pyrenees themselves; its loftiest summits are the Alcazabar (10,873 feet), Veleta (11,385 feet), and Cerro de Mulahacen (11,660 feet); this last summit is a round dome, bearing the name of the father of Boabdil, last of the Mussulman kings of Granada.



A GITANO.

The Corral of Veleta, at the foot of the conical peak of Veleta, is a cirque quite similar, on a small scale, to the *oule* of Troumouse, in the central Pyrenees; in the recesses of one of the folds of this chasm stretches the most southern glacier of this part of the globe, that of the Genil, from whence escapes the poetic river of Granada. This ice-field is 1900 feet long, and lies at an altitude of 9380 to 9583 feet. The view from these eminences is magnificent; Africa can even be seen, fully

125 miles away to the southward. The Sierra Nevada is very near the Mediterranean coast, which is here the hottest zone in Europe, the annual mean reaching in certain spots 68° F. The waters of the northern slope flow to the Guadalquivir, which drains an area of 21,600 square miles; in the name of this stream it is not difficult to recognize the Arabic words Wady el-Kebir, the Grand River. The Guadalquivir receives on its right bank some remarkable torrents. Rising in the plains bounded on the south by the Sierra Morena, they refuse to take a northerly course toward the neighboring Guadiana, from which no obstruction isolates them; they prefer to cut their way through the Sierra Morena, and run to the south toward the Guadalquivir. Such caprices are not rare in the Spanish torrents. The Jucar, which is formed in the mountains of New Castile, near the sources of the Tagus, gnaws to the very base the bold rock of Cuenca, and then it enters the flat regions of La Mancha; there it would naturally glide with the slope of the land toward the Guadiana; but, scorning a path so easy, it turns sharply to the east, and flows from rapid to rapid, across mountains and over deep precipices, down to the Mediterranean in Valencia.

The Guadalquivir carries, perhaps, 1400 cubic feet per second in low water, and about 8800 on the average. It waters the Andalusian plain (6370 sq. m.), passes Cordova and Seville, and flows into the Maremmas,¹ or alluvial wastes, with which it has slowly filled in a gulf of the sea; this tract, which has now ceased to enlarge, is separated from the ocean by the dunes of Las Arenas Gordas.

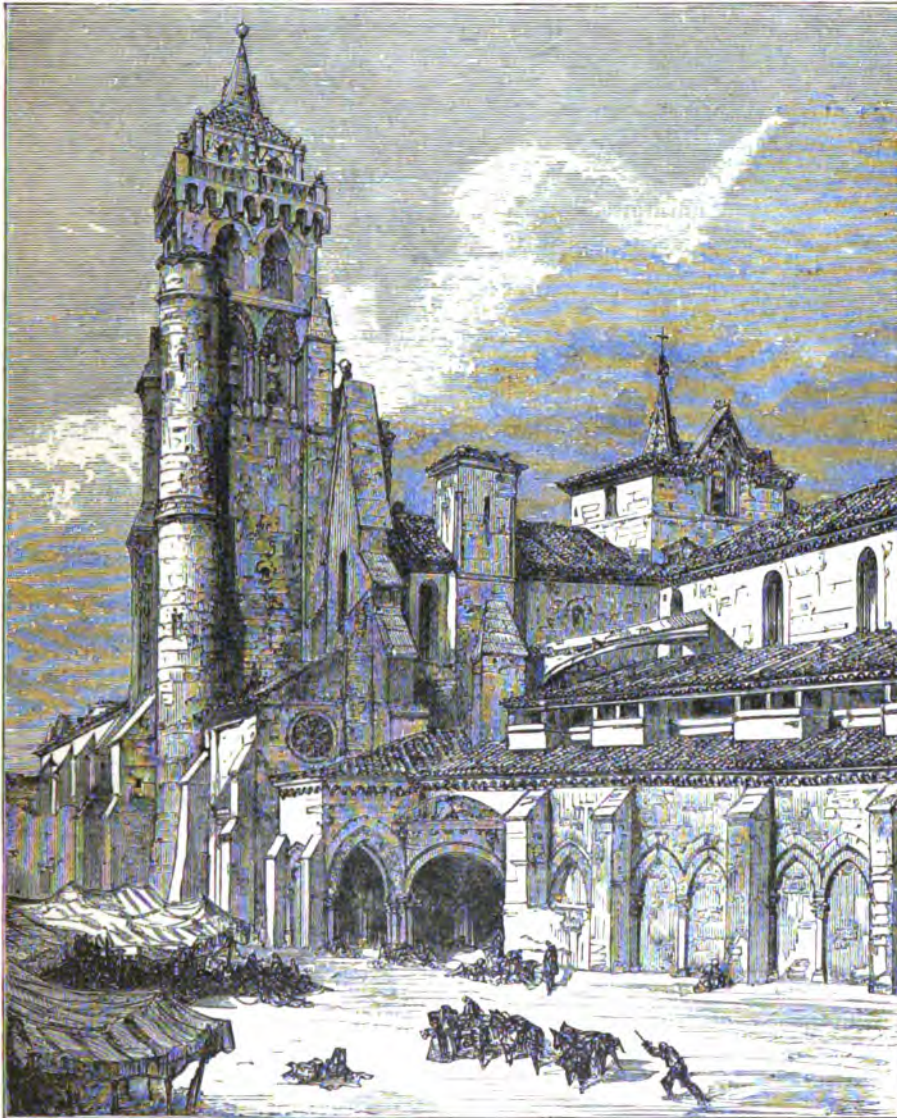
The basin of the Guadalquivir and the slope of the Sierra Nevada facing the Moroccan Rif form Andalusia, a country famous for its snow-capped mountains under an African sun; for the poetry left there by the Moors; for the graces of its women, the gayety of its people, and its fine breed of horses. To the stranger, the name alone opens up a paradise of enchanting fancies. It has, however, its unattractive features,—naked, ruined hills, thirsty glens, powdery plains, lagoons, pestilential swamps, dilapidated and fetid villages, and, in the valley, the yellow waters of the Guadalquivir flowing between earthy banks. But what charms, what gladsome hues, what grandeur on the shore, in the Sierra Nevada, in the Alpujarras, and the Serania de Ronda! This land is especially dazzling when seen as it unfolds from the defile of Despeñaperros, near the valley of Las Navas de Tolosa, which was the scene of a terrible revenge of the Spaniards for their defeat at the Guadalete. We have travelled from Madrid through melancholy regions, and have passed the Sierra Morena, when all at once we stand on the threshold of a marvellous country, which floats away in the distance below, glowing, blue, violet, and vague.

Except for differences of religion, language, habits, and costume, one would hardly distinguish the Andalusian from the Moroccan. If man is not identical in the two lands (though composed of nearly the same elements), there is little dissimilarity in scenery. It is only since the last century that the Muzarabic dialect, left by the Moors in the sierras of Baetica, ceased to be spoken. The Andalusians have contributed generously to the conquest and peopling of Latin America.

The Origin and Character of the Spaniards. — Their Language; its Diffusion outside of Europe.—The Spaniards are Iberians mixed, first with Celts, then with Phœnicians and Carthaginians, then with Romans, and with Goths; later with Jews, Berbers, and Arabs, especially in Andalusia, Murcia, and Valencia; and, lastly, with a few negroes. These last came either from Morocco with the Mussulman armies, or crossed

¹ Spanish, Las Marismas.

the sea in the period included between the first discoveries on the western coast of Africa and the time when Spain began to replace the Indians in America with blacks. The ease with which Spaniards and Portuguese become acclimated in torrid regions has been attributed to this modicum of black blood, as well as to the blood of



CONVENT OF SANTA MARIA LA REAL DE LAS HUELGAS, AT BURGOS.

their Moorish ancestry. We say Moorish and not Arab, for it cannot be too often repeated that from the victory gained on the Guadalete in 711, by 13,000 Berbers and 300 Arabs, until the fall of Granada, in 1492, few Arabs entered Spain. The men who subjugated the Peninsula in a few years, and then defended the Crescent against the

Cross in a thousand battles, those warriors, aqueduct-builders, architects, decorators, and artists, the men of Cordova and Granada, were almost all Berbers of the different Moghrebs, or from the Sahara; they were urged into the neighboring land of Spain, some by fanaticism, but the greater part by the hope of plunder. Until about 1050, there were few Arabs in North Africa, except in the small district of Kairwan; and the Orient, bled by civil or religious wars, was incapable of sending the smallest squadron of Ishmaelites to aid the Berbers in the holy war against the Spaniards. When the Hilalian invasion had thrown an entire Arab people into North Africa, then, and then only, compatriots of the Prophet went to fight in Spain by the side of the Moghrebins;¹ the latter gradually adopted their religious tongue² as their every-day speech, and ended by passing, to all appearance, into the Arabic race. We scarcely find great Oriental contingents in the army which Islam opposed to the Christian battalions in Spain, until after 1195.

As evidence of this struggle between two religions and two peoples, there remain on the Peninsular soil some hundreds or thousands of Arabic names of localities. They are found especially in Andalusia, and in the kingdoms of Murcia and Valencia, but we encounter them even in the Ebro regions, and to the north of the Douro; it is only in the Basque Provinces, in Asturias, and Galicia that they are wholly wanting; they begin for the most part with *al*,³ *ben* or *beni*, and *guad*: *Al* for *el* is the Arabic article: Alcalá, Alcantara, Alhama; *ben*, *beni* is the word which precedes a tribal name: Benicasim, Beniganim, Benimamed, Benimuslem; *guad* is the *wady* of North Africa, signifying stream, torrent, channel: Guadalquivir, Guadiana, Guadalimar, Guadalete, Guadiaro, etc.

The Spaniard is grave, haughty, dignified, courageous, tenacious, strong-willed, and patriotic. His gravity often degenerates into unsociableness, his haughtiness into boasting, his dignity into vanity, his will into blind obstinacy, and his courage is often accompanied with brutality. In the present century alone, the Spaniards have shed more blood in street fights and skirmishes and in party conflicts than was required of them for the conquest of America. Spain has given to the world great painters, writers, poets, dramatists, earnest and eloquent orators, gloomy politicians, and generals with hearts of steel. Her historic renown is based on her stubborn heroism, her determined resistance of invasion, her great part in the discoveries in the New World, and the zeal of her *conquistadores*, who tamed both nature and man in America.

The Spanish language is derived from the Latin, like Portuguese, Italian, French, and Roumanian; it is grand and sonorous; but, when spoken rapidly, it becomes shrill, and there is an unpleasant repetition of sounds. English and Russian are the only other tongues that give as great promise for the future, for, though Spain has lost the empire of the world, the lands across the seas have not forgotten the Castilian language.

Spanish is already spoken:—

In the Canary Islands;—in certain portions of the United States which were formerly a part of Mexico;—in Mexico;—in Central America;—in the United States of Colombia or New Granada, in Venezuela, Ecuador, Peru, Bolivia, Chili, the Argentine Republic, Uruguay, and Paraguay.—In several of these countries it is not wholly the national tongue. In Mexico, in portions of Central America,

¹ See page 422.

² The Koran, the sacred book of the Mussulmans, is in Arabic.

³ In Spain and the Canaries, 448 communal names begin with *al*.



SPANIARDS.

in Ecuador, Peru, Bolivia, Paraguay, and in certain quarters of the Argentine Republic, it is little used except in the cities, but as it is the written language, the idiom of civilization, the tongue of the schools, it is gaining on the Indian dialects, which will not be able to resist it much longer. Spanish is also the official language in the Philippine Islands.

The Spaniards are unequal to the colonization of Spanish America, owing to its vast size. Moreover, thousands of Peninsulars settle every year in Algeria, principally in the province of Oran. The greater part of these come, it is true, from the *pueblos*¹ of Alicante and Valencia, and from the Balearic Islands, and are not true Spaniards but Catalans by race and speech; many Andalusians, also, emigrate to the Tell. The emigrants to America are from all parts of Spain, but especially from the Basque country, and from Galicia, Andalusia, and Catalonia. On an average, about 25,000 persons leave Spain yearly, not to return; the greatest share of these embark for the Plata.

Catalan predominates still (in spite of the progress of Spanish in the cities) in Catalonia, in the east of the province of Huesca (Aragon), in the Balearic Islands, and in Valencia; along the Mediterranean, it disappears beyond the palm-trees of Elche, before reaching the huerta of Orihuela. It is a harsh idiom, but energetic and capable of poetry; it is closely related to the *langue d'oc* of France; it is used by more than 3 million men. Aragon, which was formerly Catalan in speech, has become Castilianized.² Bable, spoken in Asturias, is the most idiomatic of the Spanish dialects, the most archaic, the one which has best preserved the old words and old forms, the ancient sayings, and all the rustic and popular vigor; the first Christian barons warring against the Moors spoke it, before the year 1000. Galician bears a much stronger resemblance to Portuguese than to Castilian. Basque claims 400,000 or 500,000 Escudunacs.

All the Spaniards are Catholics.

Cities — Spain contains five cities having a population of over 100,000.

Madrid (472,000), capital of the Kingdom of the Spains, possesses no advantages of situation, except that it is in the heart of the Iberian peninsula. There is a saying, "From Madrid to Heaven," and again, "The world sees Madrid and holds its peace"; yet the surroundings of the town are the worst possible. It is camped in a sandy, rocky, gloomy, monotonous region, where trees and grass are produced only by dint of labor, even since the water of the Lozoya has been turned toward the city. Madrid grew with an artificial grandeur from the time of Charles V.; then Philip II. doubled its palaces by constructing the Escorial, a huge, empty, cold edifice, 30 miles northwest of the royal city, at the foot of the Sierra de Guadarrama, 3018 feet above the sea. As for Madrid itself, it lies at an altitude of 2130 feet, in a very harsh climate, on the Manzanares, a river of no importance; the Spaniards say of this stream that the water was sold to build the bridges over the river, that the channel has to be watered to lay the dust, that a glass of water is brought it to quench its thirst, that it is the chief stream of the globe for navigation on horseback and in a carriage, that it is one of those rivers that can be swept out in summer, such as are the delight of Théophile Gautier.

Barcelona (272,000; 370,000 with the suburbs), the capital of Catalonia, outstrips Madrid in industries; its harbor is the busiest in Spain, and one of the most important on the Mediterranean. A few leagues away, not far from the Llobregat, a little Pyre-

¹ Villages.

² The Rio Cinca separates the Spaniards from the Catalanophones.

nean stream, rises the enormous, isolated mass of Monserrat (4058 feet); pilgrims still make the ascent of the mountain, but the monastery has lost its wealth, and its hermitages are empty.

Valencia (171,000), on the Turia or Guadalaviar, 3 or 4 miles from the Mediterranean, is a factory town and the entrepôt of a vast and magnificent huerta.

✓ Seville (143,000), the "oven of Spain," on the Guadalquivir, is distinguished for its brilliant climate, its bull-fights, its gay life, and its inscription in honor of the Genoese who discovered America: *A Castilla y á Leon otro mundo dió Colon*; that is, "Columbus gave Spain a new world."

Malaga (134,000), on the Mediterranean, at the foot of wild mountains belonging to the Sierra Nevada range, sells the celebrated wine which grows on her schistose rocks. Fifty miles to the west, on the Guadiaro, in the Serrania de Ronda, is perched one of those extraordinary cities the sight of which would well repay a journey from the most distant land. Ronda (at an altitude of 2451 feet) is composed of two towns lodged on the summits of a rock cleft by a precipice 525 feet deep and from 80 to 230 broad. The two sections of this other Constantine, where in truth Berber blood is not wanting any more than in the Numidian city, are connected by two lofty bridges; the highest overlooks the rio flowing through the black chasm at an elevation of 825 feet; charming gardens, sparkling waters, delightful cascades, the rain from fourteen mills fastened to the ledges of the fissure, a magnificent spring, the bridge, the view from below of the eagle's-nest where the Rondeños are perched, lend a rare charm to the fault, or, as they say in Spanish, to the *tajo*, of Ronda.

Then follow: Murcia (98,500), a lazy town, in a beautiful huerta, on the Rio Segura; — Saragossa (92,500), the old capital of Aragon, at the confluence of the Ebro with the Huerva and the Gallego; — Granada (73,000), unrivalled in Spain for the beauty of its surroundings, its admirable view of the Sierra Nevada, which rises on the horizon into sidereal heights, its poetic memories, and its Alhambra, the most famous monument of Moorish art; — Cartagena (84,000), heir to the great name of Carthage, a superb Mediterranean port; — Cadiz (62,500), graceful and gay, an ocean port, having commerce with America; — Jerez de la Frontera (62,000), in a famous vineyard; — Palma (60,500), capital of the Balearic Islands; — Valladolid (62,000), which was the capital of the Spains before Madrid; — Cordova (56,000), on the Guadalquivir, in the centre of Andalusia, a city which under the Moors had a million souls, and the most learned and most celebrated schools in the world: the mosque of Cordova, to-day the cathedral, was the fairest of Islam; imposing still, there remain 876 columns, or a half of all the pillars which supported the domes.

Gibraltar. — Not all Spanish soil belongs to the Spaniards; the impregnable rock of Gibraltar, with an area of 1240 acres, and 18,500 inhabitants, is held by the English. The town of Gibraltar is situated opposite the African Ceuta, at the foot of an isolated block 1408 feet high, which is joined to the mainland by a tongue of sand; the only monkeys of Europe live on this rock.

PORTUGAL.

Serras. — North Portugal. — South Portugal. — Portugal, the ancient Lusitania, lies between Spain and the Atlantic Ocean; its length from north to south is 362 miles, while from east to west the breadth ranges between 90 and 140 miles, the average being 104. Portugal has an area of about 34,500 square miles,¹ and contains a population of 4,307,000, or about 125 persons to the square mile; including its official dependencies of the Azores and the island of Madeira, the area is 35,551 square miles, and the population 4,708,000.

This detached fragment of Spain prolongs the Spanish sierras; and four great Spanish rivers — the Minho, the Douro, the Tejo or Tagus, and the Guadiana — all rise in Spain, and flow through that country. Portugal possesses some vast plains, such as the valley of the Tagus above Lisbon, and the plain of Alemtejo, but the surface is chiefly in serras, which are for the most part destitute of forests. The culminating *cantaro* of the highest mountain-chain, the Serra da Estrella (Star Chain), is a peak of 6540 feet; the Portuguese mountaineers apply the name *cantaro*, which means pitcher, to the lofty eminences from which living waters descend; in like manner the ancients represented the source of a river by an inclined urn. This highest summit is a granite and gneiss dome, rising half-way between the "learned" Coimbra and the Spanish frontier. It overlooks two broad valleys, — broad for Portugal, — the valleys of the Mondego and the Zezere; the Mondego reaches the sea by Coimbra; the Zezere is lost in the Tagus below Abrantes. Snow clings for several months of the year to the Serra da Estrella and other chains between the Douro and the Minho, but south of the Tagus there are only low, treeless, barren, burning serras.

Since Portugal extends through so many degrees of latitude, the northern provinces do not bear a strong likeness to the central nor the central to the southern. In the north, Tras-os-Montes, Entre-Douro-e-Minho, and Beira alta resemble Galicia, a Spanish province whose customs and language connect it with Portugal rather than with Spain. The Gallegos, or Galicians, have from early times emigrated to the delightful regions of the Minho and the Douro, and they have scattered their families here by thousands. Multitudes of Gallegos still remove annually to this part of Portugal as servants, laborers, water-carriers, vintagers, and harvesters; the prince of Portuguese poets, Camoens, was descended from a Galician family whose estates touched Cape Finisterre. The Portuguese population between the Minho and the Douro, bled by the incessant emigration to Brazil, would be unable to sustain itself, notwithstanding its prolificness, were it not for this influx of Galicians. The Gallegos do not confine their invasions of Portugal to the northern section; they are found in great numbers in the central towns, and even in the southern; in Lisbon three thousand of them were employed as *aguadeiros*, or water-carriers, alone, before the aqueduct was constructed which now supplies the capital with water from the great spring of Alviella, in the Serra da Lua; there are possibly 100,000 Gallegos in all the cities of the kingdom. The Gallegos, therefore, work and populate for the Portuguese, but the latter none the less despise the parsimonious rustics: "It takes two hundred Gallegos to make a man," they say.

The centre of Portugal, along the fluctuating Mondego and along the Tagus,

¹ Exactly 34,419½, according to Strelbitsky, *Superficie de l'Europe*, 1882. — Ed.

comprises Estremadura, Beira baixa, and a part of Alemtejo. The cultivated productions here are the same as in the northern region, and the vine-culture constitutes the competency of several towns near Coimbra; palms grow at Lisbon; in Alemtejo, where



PORTUGUESE.

the wet *landes* emit pestilential effluvia, the soil is divided into vast estates, which are almost abandoned; so that, in spite of the fertility of the province, it supports proportionately scarcely a tenth of the people who occupy the small farms of the Minho region; the latter contains 362 persons to the square mile,¹ the former 39; — nearly

¹ Nearly 250 in the district of Vianna do Castello, 320 in that of Braga, and 529 in that of Oporto.

60 inches of rain falls yearly at Oporto, and 79 on certain heights in Entre-Douro-e-Minho, while Alemtejo receives 20, 22, or 24.

The name Alemtejo, signifying beyond the Tagus, was given to the province by the Portuguese of the centre. The people of Coimbra and of Lisbon, who succeeded those of Guimarães as founders of Portugal, naturally called the region lying on the opposite bank of their principal stream, Alemtejo, as they applied the name of *Tras-os-Montes* (beyond the mountains) to the country which for them extended on the other side of the central serras, and which was the cradle of the country; Portugal, in fact, had its beginnings at Guimarães, between the Minho and the Douro, and, if the kingdom had at first absorbed Galicia instead of stretching immediately toward the south, there would have been perhaps an Alemdouro as there is now an Alemtejo. At the time Portugal was founded, the city of Guimarães formed a part of Galicia, which then extended as far as the Douro; this accounts for the fact that the Gallegos and the Portuguese are brothers. In measure as we approach the south of Alemtejo, the country takes on African hues. When we have crossed the Serra de Monchique (2963 feet), we descend into the "Portuguese Andalusia," Algarves, a narrow province, protected on the north but open on the south, and where the annual mean on the coast is 64.4° F., against 59° in the Douro and Minho regions of northern Portugal. The name of Algarves is derived from the Arabic, and signifies a land lying to the west.

Portugal, not including the islands, has only about 125 persons to the square mile, whereas it ought to support twice or thrice as many; but, beside the vacant and miasmatic tracts, and the *charnecas* or steppes of Alemtejo and the dry ravines of Algarves, how much soil is lost on the *cumiadas*,¹ or high desert plateaus, in the *despovoados*,² or waste lands, and, on immense stretches of coast, in the *medãos*, or littoral dunes cemented together by pine forests planted by the Brémontiers³ of the fourteenth century! How many unoccupied tracts in the mountains of the centre, and even in the north, in the coolest climate of the country! Where was once forest there is now often nothing but bushes, or parched pastures, or utter barrenness. In *Tras-os-Montes*, for example, we can travel for long hours over deserted hills on scarcely traced paths, where an occasional tangle of cross-roads is indicated from a distance by a post. Reaching the spot where we may have hoped to read directions for the journey, we find ourselves before a board on which is painted a barbarous picture, a daub of red flames and outstretched wings; these are the souls from purgatory, crying: "*Não ha dor igual a mi dor. O irmãos, lembrai vos de nos passando!*" — "There is no suffering like my suffering. O brothers, remember us as you pass!" And beneath these lines is a box to receive the traveller's obolus.

The Lusitanian Race. — Cosmopolitanism of the Portuguese. — Portuguese Language. — The Portuguese are made up of Iberian, Celtic, Roman, and Germanic elements, with mixtures of Berber blood and Arabic blood, and of negro blood south of the Tagus. These men have accomplished great things. They explored the coasts of Africa, doubled the Cape of Good Hope, changed the routes of commerce, and at one time they ruled India and the ocean. In those days Camoens thus spoke of his companions in arms: "See! they go joyously, by a thousand routes, like bounding lions

¹ This nearly corresponds to the *páramos* of the Spaniards.

² This word answers to the Spanish *despoblados*.

³ Brémontier was a famous French engineer (1738-1809), who was the first to fix the dunes along the Bay of Biscay, by planting pines on them. — Ed.

and wild bulls, exposing their lives to hunger, to sleeplessness, to the sword, to fire, arrows, balls, burning climes, cold shores, to the attacks of idolaters and Moors, to perils hitherto unknown to man, to shipwrecks and to all the dangers of the deep." To-day their power is nothing more than a memory; their zeal has been quenched, and the nation's energy has been transferred to Brazil, on the other side of the Atlantic; there, Portugal has founded a new people, which is already three times as numerous as the parent people, and occupies a territory nearly 93 times the size of Portugal, and the most fruitful in the world.

It is fully four hundred or five hundred years since the Portuguese transferred their ambitions beyond the seas. Wedged between Spain and the Atlantic, they preferred



O'PORTO.

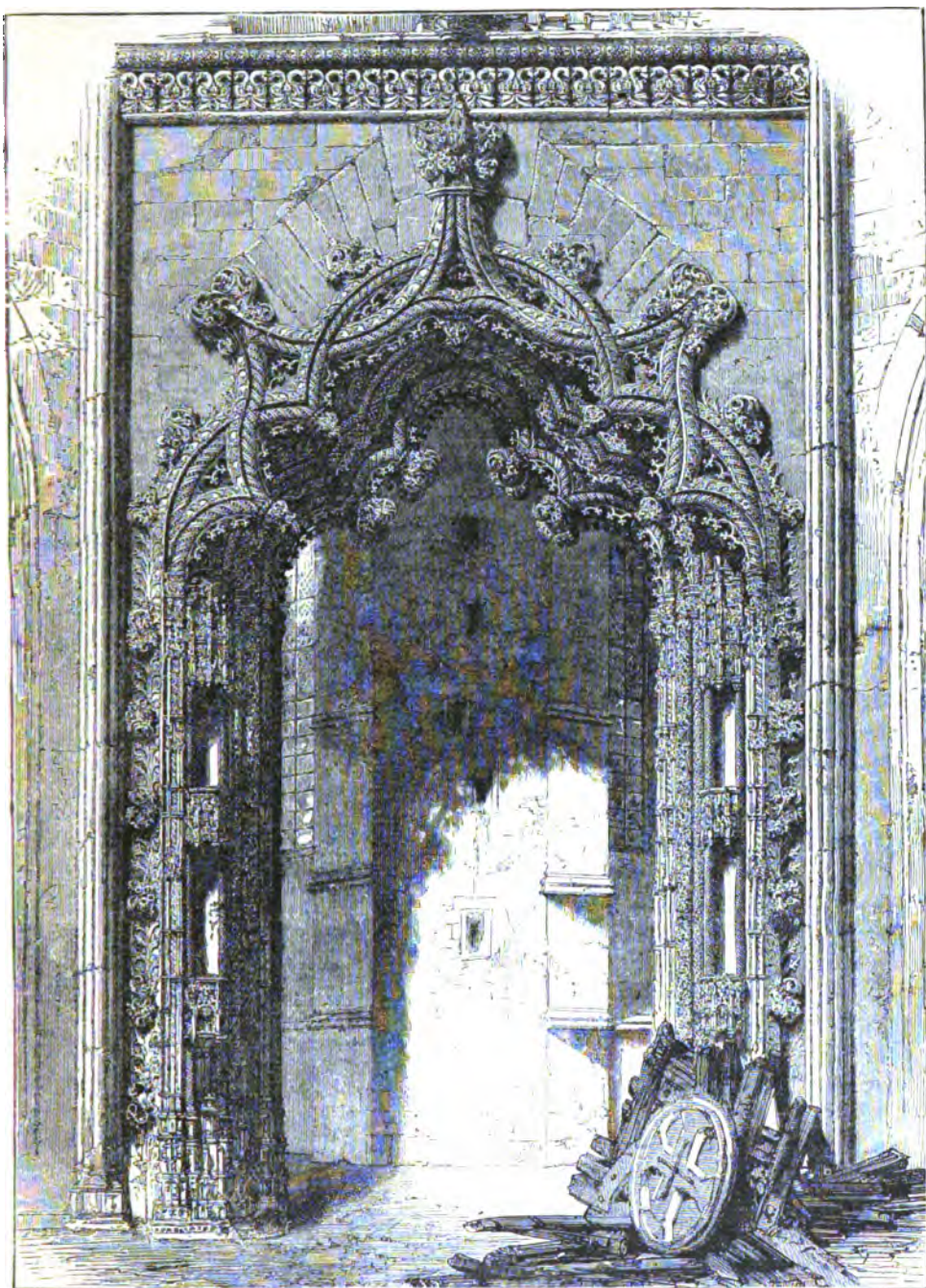
to take their chances on the waves rather than continue the hopeless struggle against the Spaniards; and they steered untiringly toward three foreign countries. First toward Africa, the home-land of their hereditary enemies, the Moors, or Infidels, the vanquished of Ourique, and the vanquishers of Al-kasr al-Kebir; and there, though they have been obliged (like the Spaniards also) to abandon the subjugation of the Moroccan valleys, they have long ruled over extended strips of African coast, which they trod before any other European nation. Later, the Lusitanians subdued and lost a part of the Oriental world, Abyssinia, Arabia, India, and numberless islands, the fairest of which was Ceylon. Brazil, which was at first despised, filled up with adventurers, who formed fruitful alliances with the Indian women, and later with

negresses imported from Africa. From this nucleus of forlorn hopes, of brigands, merchants, and Jews, from these mixtures of browns, reds, and blacks, sprang one of the greatest empires of the earth, and Portugal remained one of the smallest kingdoms. It was not solely in the temperate regions of Brazil, that is, on the southern plateaus and in the healthful province of Minas-Geraes, that Lusitanian emigrants prospered; they also founded families along the stifling seaboard, and even under the equator, in the Amazonian valley. Opposite Brazil, in South Africa, they have every hope of Lusitanianizing the immense torrid regions which they have retained on the Congo and on the Zambeze, and they are, perhaps, notwithstanding present indications to the contrary, more sure of their future there than is the famous International Association; for, of all Europeans, the Portuguese accommodate themselves most readily to life within the tropics. Their cosmopolitan qualities are ascribed to the Berber, Arab, and Black elements which have entered into the composition of the race; however, the farther north we go, the freer the nation is from African mixtures; and beyond the Douro, from this stream to the Minho, we find an entirely European people; there the Portuguese of *velha cunha* (old stock) dwell, in the most delightful of districts.

The Portuguese language became perceptibly distinct from the other Romance dialects of Iberia at the middle of the thirteenth century. It is derived from the Latin, but a large number of its words bear less resemblance to the roots from which they come than to the Spanish, Italian, or even French equivalents; this results from the dropping of a syllable or of a consonant, especially of *l* and *n*. Portuguese is poetic, peculiarly adapted to pastoral poetry, rich, but not sonorous; a vulgar accent and an excess of nasals detract from its beauty. In the appealing cry of the souls in purgatory, cited above, *não* and *irmãos* possess precisely the explosive nasal so common in Portuguese; *dor* is the contraction of *dolor*, by the loss of the letter *l*; *lembrai* comes from *rememorare*, by the changing of *r* into *l*. Of all the Neo-Latin tongues the Lusitanian has least respected the primitive consonants. Outside the limits of Portugal, Portuguese is spoken in the Lusitanian colonies, in Brazil, and on coasts where Lisbon long ago ceased to rule, as in Malacca. It is the national idiom of 16 or 17 millions, and this number, which is rapidly increasing, is destined to swell to colossal proportions, for Brazil has place for a population of 500 or perhaps even 1000 millions.

All the Portuguese are Catholics; they take great pride in their allegiance to the True Church; but they are still more proud of being Lusitanians, "for, if Spain is the head of Europe, Portugal is its diadem." They have no love for their neighbor and hereditary enemy the Spaniard: "*De Espanha, nem bom vento, nem bom casamento.*"—"From Spain, neither good wind nor good marriage."—And surely the wind from Castile and Estremadura brings them no good, for, coming from the steppes, and being entirely continental, it is withering and desolating.

Cities.—Lisbon, in Portuguese *Lisboa*, the capital of the kingdom, contains 204,000 inhabitants, 253,000 including the suburbs on the hill-slopes and up and down the Tagus. For a century it was the chief commercial city. The earthquake of 1755 destroyed fifteen or twenty thousand persons, and, at the same time, far from the Tagus, beyond mountains and across sea, it overturned quarters of Oporto and levelled cities in Morocco. Scarcely a more terrible catastrophe is known to history. Lisbon was mourning for her dead on the morning of the 1st of November, All Saints' Day; the air was bright and calm; about nine o'clock, the earth rumbled, the sun grew pale



UNFINISHED TOMB-HOUSE OF EMANUEL THE FORTUNATE, IN
THE BATALHA CATHEDRAL.

in a livid sky, the stream was powerfully agitated, the city cracked; the pallid orb of day seemed to be extinguished, its rays were lost in an immense cloud of dust; flames burst from the ground, and the insurgent Tagus shattered the vessels before Lisbon; plains rose in hills, hills slipped into ravines or were swallowed up by the sudden yawning of a chasm, while every work of man's hand swayed and fell, — hovels, palaces, theatres, convents, spires, and churches. Lisbon lies on the right bank of the Tagus, at the very spot where the stream contracts to 5250 feet, after it has just expanded into a blue lake of 97 square miles, called Straw Lake.¹ Nine miles from the city, — built, say the inhabitants of Lisbon, on seven hills, like Rome, — the Tagus is engulfed in the Atlantic, before the rocks of the jagged and luminous Serra de Cintra.

Oporto (pop. 106,000), 2 or 3 miles from the sea, covers rugged hill-slopes along the blue Douro, which is here 650 feet broad and navigable; but the rocks and sand which obstruct its mouth make navigation dangerous. Oporto is the entrepôt of northern Lusitania, the richest and most populous part of the kingdom; it ships the majority of the emigrants to America; ten, twelve, fifteen, or eighteen thousand men² yearly hazard the perils of the ocean to reach Brazil, of which many marvellous tales are recounted in the cottages of the serras. Oporto carries on a commerce in the excellent wines which are grown in the schists bordering the stream. If we ascend the Douro beyond these vineyards, we enter gorges of a stern grandeur, where the stream slumbers at the foot of majestic rocks. There we find nothing of man, nothing of life, except perchance a shepherd here and there on some lofty rock, a goat browsing on shrubs 500 feet above the dull waters, or a smuggler who is making his way by frightful paths from Portugal into Spain or from Spain into Portugal, for here the calm, gloomy, narrow Douro separates the two kingdoms. Not far from Bemposta, a small town of *Tras-os-Montes*, near the mouth of the Spanish Tormes, the sombre, silent rio girdles the little rock of Peredo. One can easily spring from Portugal to this rock and from this rock to the Spanish bank.

Coimbra (pop. 13,000), on the Mondego, in sight of the Serra da Estrella, is the seat of the Lusitanian university, the ancient capital of Portugal, the spot around which linger delightful memories of the old history. There are many Brazilians among the students here.

ITALY.

Situation. — Extent. — Italy borders the Alps on the north, and from its last promontories on the south the mountains of Tunis are visible in clear weather. It lies at the centre of the Mediterranean, over which it ruled for centuries in ancient times. Italy contains a population of 30,947,000, on an area of 110,620 square miles,³ or 280 persons to the square mile; these inhabitants are distributed over continental Italy, peninsular Italy, and the islands.

Continental Italy. — Continental Italy, which now comprises Piedmont, Lombardy,

¹ Straw Lake, in its broadest portion, is from 9 to 10 miles wide.

² Including the Azores and Madeira; nearly all the Portuguese emigration comes from the seaboard between the Minho and Lisbon, and from the islands; very few emigrate from the interior or from the south.

³ This is the estimate of the area of Italy recently made by the Military Geographical Institute. Of these 110,620 square miles, 9935 belong to Sicily, and 9293 to Sardinia and the smaller islands. — Ed.

Venice, Liguria, and Emilia, at the time of its invasion by the Romans, differed in no way from Gaul. The inhabitants of these southern slopes of the Alps, as well as those dwelling beyond the mountains, were of Celtic speech and of more or less pure Gallic blood; the Romans gave the name of Cisalpine Gaul to the southern region, in opposition to Transalpine. The Cisalpine Gauls, like those across the Alps, abandoned their ancestral tongue and became Latins after their subjugation by Rome.

With its nearly 40,000 square miles and its 14 million inhabitants, continental Italy



LOGGIA OF THE FARNESE PALACE, ROME.

has few rivals in Europe, and even in the world. The soil of its plain, which covers more than 15,000 square miles, is composed of an inexhaustible alluvium. From the ice-clad Alps which form the walls of its amphitheatre, broad, turbid torrents descend into wonderful lakes, out of which they flow as transparent rivers. Below the lakes the rivers are distributed through canals for the irrigation of superb fields stretched beneath a southern sky. The climate is mild, though not enervating, and the rainfall is ample, but not too copious, especially in the east; the plain is everywhere fruitful, the low mountains are charming, and the Alps are always sublime. The highest two

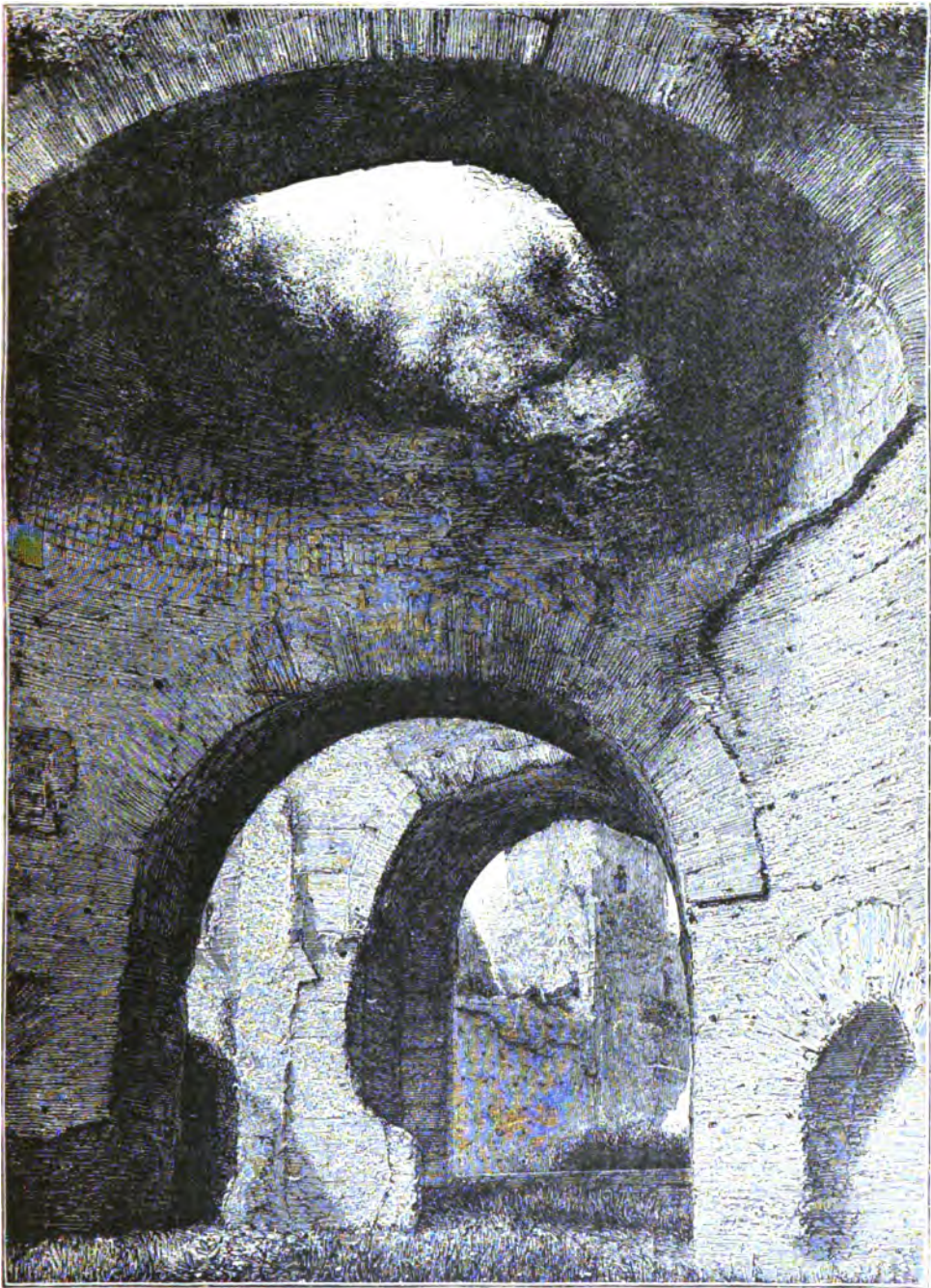
peaks of central Europe, Mont Blanc (15,781 feet) and Monte Rosa (15,217 feet), dominate continental Italy.

All the southern waters from the huge Alpine arc which sweeps from the Gulf of Genoa to the Adriatic flow into the Po and the Adige.

The Po (419 miles) rises, at an altitude of 6404 feet, in Monte Viso, a magnificent pyramidal peak towering between Italy and France. The course of the Po in the mountains is brief. In the plain, it bathes Turin, then on the right bank it receives the torrents from the Apennines, which are scant in summer, and on the left the rivers from the Alps, which are full-banked at all seasons. The Ticino, one of its large affluents, is purified in Lago Maggiore; this river owes its great volume to the snows spread out from Monte Rosa to the Splügen, on the cornice of the southern Alps. The Ticino escapes from Lago Maggiore, or Lake of Locarno, with a flow of 141,240 cubic feet per second in the freshets, 1750 at extreme low water, and a mean flow of 11,335. Lago Maggiore is a narrow sheet twisting between scarped mountains; it has an area of more than 80 square miles, with a depth of 1230 feet; but both area and depth are diminishing, for vast masses of debris are borne down to the lake from the mountains. Lago di Como, covering 60 square miles, and having a depth of 1352 feet, clarifies the Adda for the Po; from Como's urn of dark green water the Adda is discharged at the rate of 28,850 cubic feet per second at high water, 565 at extreme low water, and a mean of 6603; like Maggiore, Como is gradually filling up, and both lakes will in time be obliterated. Lago di Garda, or Benaco, the largest lake of northern Italy, receives a much smaller torrent than either the Ticino or the Adda, and is consequently diminishing less rapidly than the other two lakes; it has an area of 116 square miles, with a depth of 965 feet, and its sapphire blue waters are magically transparent; its outlet is the Mincio.

The Po passes near Pavia (pop. 30,000), where the French suffered a signal defeat at the hands of the Imperialists in 1525. The world might be subdued with the forces which France has lost under the Italian sky. And the French are not the only people whose armies have trod Ausonia's soil. Ever since the dawn of history, the men of the north have descended with the cold torrents into the favored plain, but the southern sun always triumphs over them; Italy, though so long overrun by barbarians from beyond the mountains, has nevertheless remained essentially Italian; she has bewitched all the rude *Tedeschi* who have been attracted at different periods into her territory, and they have disappeared without regrets in the nation which they at first haughtily trampled under foot.

The Po then bathes the city of Piacenza (pop. 35,000), then Cremona (pop. 32,000), and leaves on the left, on the Mincio, Mantua (pop. 28,000), mother of the gentle Vergil; lower down, one of its arms passes Ferrara. Here it is already in its delta; it empties into the Adriatic through seven large branches, which communicate by countless channels cut in the mire; it discharges 5508 cubic feet per second at extreme low water, 183,121 in the floods, and a mean of 60,734, the tribute of a basin of less than 29,000 square miles. In spite of the lakes, at the foot of the Alps, which purify all its affluents, this ancient *Eridanus* carries with it on an average each year 1624 million cubic feet of debris, and oftentimes over 3500 million. Its delta enlarges annually by 279 acres, with an encroachment of 230 feet on the sea, in the direction of Istria, a high, rocky shore rising opposite the low Italian beach. Still, a great part of its mire is deposited in the wet plain, where rice grows luxuriously, when the swollen streams burst the *argini* (dikes);—a frightful



ROME—RUINS OF THE BATHS OF CARACALLA.

disaster, for these levees are constructed to protect over 4600 square miles of the best land in Italy, if not in all Europe.

The Adige, the river of Trent in Austria, and of Verona in Italy, issues from the Tyrolese Alps, and mingles its deltaic deposits with those of the Po; canals distribute its fluctuating flow, which ranges between 700 and 84,700 cubic feet per second; its mean discharge is estimated at 16,950 cubic feet, its length at about 250 miles, and its drainage area at something less than 9700 square miles. The Piave (134 miles), another powerful and variable torrent from the Alps, pours into the Gulf of Venice a mean of 11,300 cubic feet per second, the beautiful tribute of a basin of 2000 square miles.

With 291 persons to the square mile in Piedmont, 465 in Liguria, 442 in Lombardy, 343 in Venice, and 297 in Emilia, continental Italy ranks among the most densely populated countries of Europe. Though Liguria lacks large rivers for the irrigation of its valleys, it has the mildest of climates and the most delightful winter-resorts; as for the great plain of the Po, its inhabitants have put it into remarkably good condition; they have tapped the enormous torrents regulated by the lakes: from the upper Po they have turned off the Cavour Canal (1483 cu. ft.); from the Ticino, the Naviglio Grande (1801 cu. ft.); from the Adda, the Muzza (2154 cu. ft.) and the Martesana (918 cu. ft.); from the Adige, the canal of Verona; and from these canals a net-work of arteries and veins carries the water unceasingly over all this part of Italy, which has known no rest for three thousand years. In this vast cemetery, the hard-working peasant has untiringly repaired his demolished house, rebuilt his canal, made over his land trampled down in furious conflicts, and levelled his hillocks filled with the dead. Nearly all the forests of this alluvial soil were long since destroyed; clusters of tall poplars, here and there, mark the sites of large villages, which would pass elsewhere for cities; superb trees, with their roots in the water and their tops in the sky, border the broad irrigating and navigable canals; the farms are separated by "intermediate walls," made of vines intertwined between elms or maples; and the same juices that send these vines to the very topmost branches of the trees produce olives on the olive-trees and a thick foliage on the mulberries, from which the silkworms spin their famous cocoons.

However, a great scourge ravages these well watered fields; this scourge is fever, the plague of all wet lands, especially of rice-plantations.

Peninsular Italy. — Peninsular Italy, covering an area of 52,000 square miles, bristles with mountains; it contains only a little over 2700 square miles in plains, which are nearly all simply the broadening-out of river-valleys. The remainder comprises the limestone Apennines, on which scattered woods of pines, firs, beeches, oaks, elms, and birches bear evidence of the existence of an ancient forest. Italy owes its mean altitude of 1696 feet to the Apennine masses much more than to the Alpine giants; only four European countries — namely, Switzerland, Iberia, the Slavo-Greek Peninsula, and Austria — surpass Italy in mean elevation. The farther south one goes, the narrower the peninsula becomes, and the more ragged the Apennines. The culminating point of the long chain, the Gran Sasso d' Italia (9521 feet), is a steep limestone peak, with remnants of forests; it rises north-east of Rome, in the Abruzzi, within sight of the Adriatic. In the south, in Calabria, which has even a more broken surface than the Abruzzi, the Apennines terminate, opposite Sicily, on the Strait of Messina, in the granitic mass of Aspromonte (6263 feet); this mountain is rugged, as its name indicates, but the palm-tree grows at its base.

The Italian peninsula nowhere reaches a breadth of 125 miles from sea to sea. Its two slopes are dissimilar. The narrower Adriatic slope has long straight coasts, with very short torrents, and its inhabitants have never made any mark in history. On the western slope, the shore is better indented; the greater distance between the sea and the mountain gives space for streams, and along two of these streams mighty nations have flourished; one of these fashioned the old world. The Arno, the Tiber, the Garigliano, and the Volturno flow here.

The charming Arno, rising in that part of the Apennine chain which separates Florence from Bologna, moves at first toward the south, as though it were flowing down to the Tiber; but near Arezzo, not far from the place where the Chiana Canal enters it, it turns to the north-west, then to the west, and, running past Florence, empties into the sea near Pisa; since the twelfth century it has gained 3 miles here on the waves.

The Tiber, in Italian *Tevere*, one of the most famous rivers of the world, rolls a mean of 10,275 cubic feet per second, gathered in a course of 260 miles, from a basin of 6846 square miles. At rare intervals, in very great floods, its flow reaches 60,000 cubic feet; its low-water discharge is 525 cubic feet, a fourth of which comes from branch rivers, and the other three-fourths from bottom springs which well up from lakes formed in caverns under the limestone. The Tiber has its source in the Etruscan Apennines; it winds through a valley opening to the south, and receives torrents fed from mountains that are capped with snow, in the season, like the Soracte of Horace. A few leagues north of the conical hill of Caprese (Michel Angelo's native town), it issues from a forest of old oaks, on one of the spurs of the Fumajolo, not far from the Adriatic; from the summits overlooking the birthplace of the stream ancient Rimini is sometimes visible in fine weather. The Tiber leaves Perugia on the right, passes near Soracte, a limestone mountain in a volcanic region, then, below Rome, it enters the Mediterranean by two branches: one, that of Ostia, is the great Tiber, the natural Tiber; the other, the Fiumicino, is the artificial Tiber, a navigable canal, constructed in the early days of the Roman Empire. Between the two branches lies the Isola Sacra, or Sacred Island, which was once a garden of roses consecrated to Venus; it is now a marsh, where wild bulls trample over reeds, rushes, and pale asphodels. The treacherous and swift floods of the Tiber are of a reddish yellow hue. Not that the river does not drink the waters of limpid springs, such as those fountains of Le Vene, from which flows the beautiful Clitumno, sung by Vergil and Byron; but it is sullied by the earthy particles which it wrests from fertile Umbria. Its finest affluents are the Topino, the Nar, and the Anio. It is the Topino that receives the Clitumno. The Nar, or Nera, receives the Velino, which reaches it above Terni by the beautiful cascade called the Cascata del Marmore, the first fall of which is a leap of over 300 feet; beyond this point the Nera flows through a fissure, which is often not more than 3 feet wide, although the stream carries on the average 4237 cubic feet of water per second; here it passes under a natural bridge at Papigno. The flow of the Anio, or Teverone, the torrent which forms the falls of Tivoli, seldom sinks below 880 cubic feet. South-east of the mouths of the Tiber, between Porto d' Anzio and Terracina, stretch the Pontine Marshes; they lie along the sea, behind a line of dunes; man flees from their infected atmosphere, and buffaloes, boars, and stags roam over this Roman Maremma (290 sq. m.).

The Garigliano falls in the two lofty cascades of Sora. It receives the Fibreno,

a wonderful fountain, the abundance of whose waters is attributed to subterranean emissaries of the Celano (the *Fucinus* of the Latins). This ancient lake slumbered in a limestone basin, at an altitude of 2297 feet; sometimes it overflowed the plain to long distances; sometimes it receded from its banks and became a shallow and loathsome pond. Rome was unable to drain it; the Emperor Claudius attempted the work, and caused a tunnel to be cut beneath Salviano, for the purpose of discharging the water into the Garigliano. The tunnel has recently been restored and completed by Prince Torlonio, and the lake is nearly dry.

The other large lakes of peninsular Italy border the basin of the Tiber. Lake Thrasymentis, or the Lake of Perugia (52 sq. m.), with no visible outlet, lies, at an altitude of 843 feet, between mountains gray with olive-trees; this lake will suffer the fate of Celano. The Lake of Bolsena (45 sq. m.), 459 feet deep, lies 994 feet above sea-level, south-west of Orvieto, in a volcanic basin fringed with chestnut-trees. The lava around the lake is carved into precipices which support hamlets at dizzy heights; it despatches its waters to the Tyrrhenian Sea through the Marta. North-west of Rome, the Lake of Bracciano (22 sq. m.), at an elevation of 495 feet, discharges its surplus floods through the Arrone, a coast-stream. Between the lakes of Bolsena and Bracciano, the Lake of Vico, an old crater, emits a small affluent of the Tiber. Lake Albano, south-east of Rome, in the mountains of Latium, embraces only 1483 acres. It lies at an altitude of 1001 feet, and it has been sounded to a depth of 466 feet; it communicates with the sea through a subterranean current. Not far away, the Lake of Nemi (494 acres), 164 feet deep, likewise fills an old crater.

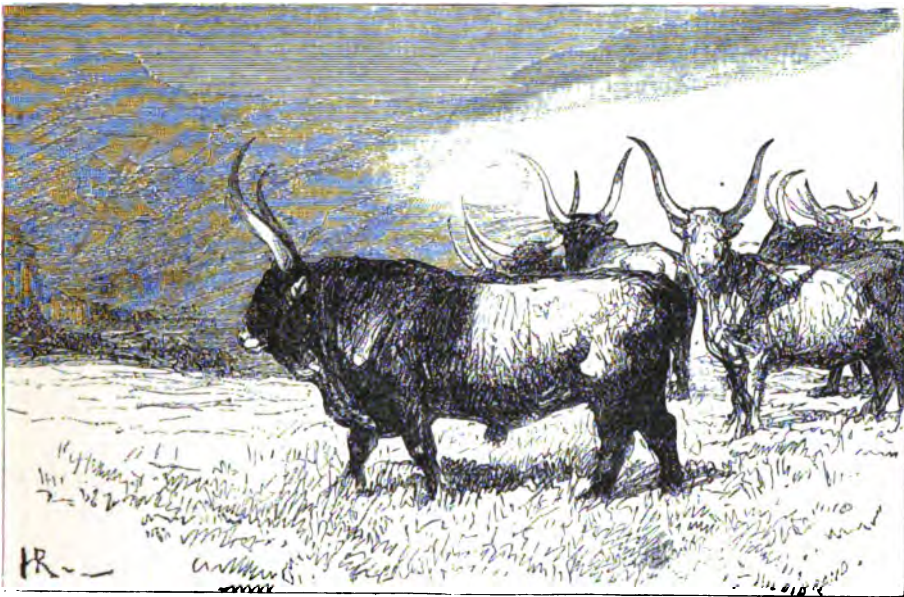
Tuscany. — The Etruscans, from whom Rome in her earliest days borrowed much of her religion and many of her laws and customs, lived on the Arno. The Etruscan people extended its confederation of cities as far as the Tiber, and even crossed the stream; it founded twelve towns in the smiling district of Campania. During the first centuries of Rome, nothing separated Etruria and the future mistress of the world but the Tiber; the stream was spanned by a wooden bridge, the planks of which were removed in times of war. The Tuscan race, which is said to be the best endowed of all the Italians, was formed from a mixture of Etruscans (a people of unknown origin), Celts, and Romans. It was in Tuscany that the language of *si* was established by writers, of whom Dante is the "duke and master"; and no region has produced more of the world's loftiest geniuses, whether poets, artists, or savants.

Tuscany includes three physical regions. Along the clear, blue waters of the Tyrrhenian Sea, the Maremma occupies the lowlands, at the mouths of several coastal streams, the strongest of which is the Ombrone. It prolongs between Leghorn and Rome the seaboard where the Arno terminates among dunes and pines, — a shore over which pass, with long and limping strides, camels which have been acclimated here for hundreds of years.¹ These lowlands embrace 580 square miles of clayey soil, with rush-grown pasturage, on which sheep and half-wild oxen browse; deadly effluvia are exhaled from the Maremma, and fever reigns here. However, the marsh does not occupy the entire district, and *maquis* alternate with groves of pines, cork-oaks, and oaks. In the valley of the Arno and on the out-mountains, which form the second physical region, the Tuscan sun ripens the grapes on vines planted between poplar-trees. All around are the ruins of old castles, crumbling towers, handsome villas, farm-houses, green pines, black cypresses, and silvery poplars; by the side of the mulberry-tree, the maize, and the generous vine, we find the olive-tree, which matures slowly,

¹ Since the Crusades, it is said.

but for centuries. In the mountains which embrace the third physical region, the oak forests (with their acorn crops for the swine), the cork-oaks, chestnut-trees, and beeches rise in successive terraces, or intermingle on the middle slopes; while larches, pines, and firs occupy the summits. The winter snows sometimes remain a long time on the tops of the Tuscan Apennines, which are more than 6500 feet above the sea. Here, in the coast highlands, between the mouth of the Arno and the military port of Spezia, are found the most famous statuary marbles, namely, those of Carrara, of Massa, of Serravezza, and of Altissimo; these mountains despatch their waters to the Magra or to the Serchio, which flows from the frosts of Garfagnana.

Opposite Tuscany, on the way to Corsica, is the island of Elba (capital Porto Ferrajo); scarcely 85 square miles are comprised within its high and precipitous shores. Monte Capanne (3409 feet) is the culminating point of the granite peaks and serpen-



CATTLE OF THE ROMAN CAMPAÑA.

tine domes of this island, "inexhaustible in metals," as Vergil says. Its iron mines, which were worked even by the Etruscans, will be worked for thousands of years to come.

Rome.—Rome, the imperial city, which ruled for centuries from Scotland to Persia, from the Danube to the Sahara, over 120 million men, grew on the banks of the Tiber. Numberless victories, interspersed with terrible defeats, none of which shook the Roman constancy, won for her the entire known world, except the hyperborean woods and marshes, burning Ethiopia, — mother of the sacred Nile, — marvelous India, and China, whose existence was scarcely suspected behind a stupendous rampart of mountains. Stone roads, running in straight lines over hills and through valleys, with indestructible bridges, furrowed the empire; and every revolt was quelled by the speedy arrival of the legions over these paved ways. A powerful administration laid a firm grasp on the nations of all tongues, a net-work of colonies

Latinized them, the treasury sapped their life-blood, and the circus, the theatres, baths, and amusements corrupted them. By enervating the people, Rome enervated herself. The vices of Asia deprived her of more virile blood than did the one-eyed Carthaginian who ravaged Italy for sixteen years; more than the "tardily enchain'd" Cantabrian; more than the Gaul who had massacred Roman senators in the very heart of Rome. However, during her days of strength and glory, Rome gave much of her blood, all of her law, and her language to the favored nations now called the Romance, or Latin, or Neo-Latin nations; that is, to the Italians, French, Spaniards, Portuguese, and Roumanians.

Naples. — The Neapolitans dwell along the Garigliano; along the Volturno, to the north of which rises the Rocca Monfina (3301 feet), the most northern volcano of southern Italy; at the foot of Vesuvius, and as far as the Strait of Messina; around the Gran Sasso; along the Pescara and the Ofido, which empty into the sea opposite the distant shores of Albania and Dalmatia; and around the bay which cradled the luxury and corruption of Tarentum, Crotona, and Sybaris. They people Terra di Lavoro; Campania, a plain formed of the ashes ejected by the Rocca Monfina; mangled Calabria; the rugged Abruzzi provinces; and La Puglia, on the Adriatic. This last, the ancient Apulia, forms a strange contrast to the Abruzzi and the Calabrias in the monotony of its *tavogliere*, or its dry plains, which are wholly destitute of streams and fountains, with little water except what is supplied from cisterns. It was the Samnite shepherds' autumn and winter pasture-grounds, and it is still a pastoral region. In the Middle Ages it took some little part in the history of mankind, when the Crusaders had gained possession of the Holy Sepulchre. These warriors had need of craftsmen, and, above all, they lacked women; servants, artisans, and women came to them from La Puglia, and very soon, below the aristocracy of the knights, the Puglians formed a class of "civils," or settlers. But all that was only for a time.

A few years ago this region formed the kingdom of Naples. It was once Magna Græcia, a brilliant, opulent, learned, artistic, beautiful, and poetic country; but it shrivelled before maturity.

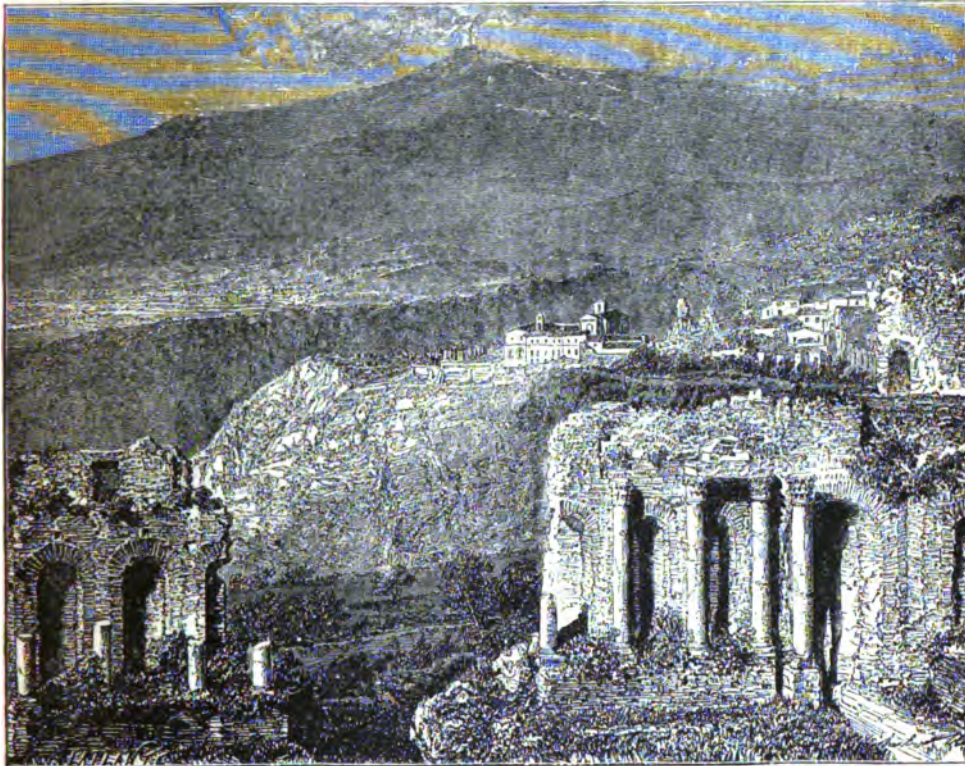
Insular Italy. — Insular Italy comprises two large Mediterranean islands, Sicily and Sardinia, and several minor islands, something less than 19,500 square miles, with something over 4,000,000 souls.

Sicily. — The mountains of Sicily (aside from Etna) are manifestly a prolongation of the Calabrian Aspromonte; but a splendid strait, the Faro of Messina, separates the two countries (though doubtless it has not always separated them). In its narrowest portion it is 10,259 feet wide; its mean depth is 246 feet, and its greatest 1089. It is only 60 miles from the capes of Marsala to Cape Bon, a Tunisian promontory. From the Pillars of the Giants, which are majestic ruins of the temple of Selinuntum, not far from Castelvetro, the vague outlines of the mountains of Tunis can be descried on the southern horizon in the clearest weather.

Sicily has passed through terrible vicissitudes, and has experienced all fortunes, from incredible splendor to direst poverty, from the unbridled luxury of the arts to grossest barbarism. It has had as inhabitants or as rulers the Sicani, who were perhaps of the Iberian family; Siculi from Italy; Carthaginians from the African mountains which are visible from Selinuntum; Greeks, who built voluptuous cities; Romans, who plundered the island and lived on its grain; Vandals, Ostrogoths, and Byzantines, who did nothing more than pass over it; Lombards; Berbers, mixed with Arabs and negroes: these Berbers occupied the island for a long time, and their lan-

guage became the polite idiom of the country; Normans, who founded a powerful dynasty there; Germans, ill fitted to endure the Sicilian climate; French; and, lastly, Aragonese and Spaniards.

The culminating peak of the limestones of Sicily, the Pizzo di Case, is only 6335 feet high; but in the east the finest volcano of Europe, Etna (10,870 feet), which marks the centre of the Mediterranean, rises from a socle of 460 square miles, with a base circumference of 112 miles; it overlooks the plain of Catania, the fertile soil of which is formed of ashes and decomposed lava. Plunging as it does on the sea, Etna loses nothing of its grandeur, and, seen from the water,



ETNA, FROM TAORMINA.

it appears to rival the Alpine or Caucasian giants. It was even once regarded as the principal peak of the world. Around its base and on its lower slopes, to the height of 2600 feet, more than 300,000 men (or nearly 1550 to the square mile) vigorously cultivate the vine and fruit-trees, in spite of the melancholy souvenirs of Etna's wrath, and in spite of the sinister warnings which are occasionally given to-day. At least one hundred eruptions of this restless mountain are known to history, some of which lasted for months or even years. Above the orchards and vineyards, oaks, chestnuts, pines, beeches, and birches weave for the giant a green girdle, which the woodman's axe is destroying; higher still there is snow throughout the winter. The heat of the soil, which overlies hidden furnaces, and the blackness of the scorix and ashes, which attracts and concentrates the rays of the sun, make the slopes

of Etna the most scorching region in Europe, the oven of that hot Sicily where the palm, the Barbary fig, sugar-cane, cotton, and bamboo grow. Off the northern coast of Sicily, the Lipari Islands (pop. 20,000; area, 57 sq. m.) rise on the route between Etna and Vesuvius; we have here Lipari, an extinct volcano, a smiling land; Vulcano, a mass of scoræ, a sterile red and black island, once dedicated to Vulcan: this volcano palpitates still, as does also the celebrated Stromboli (3091 feet). Salina, Alicudi, and Felicudi are slumbering now, but they may awake again at some future time. Sixty miles south-south-east of Sicily, and 50 from Tunis, is arid and volcanic Pantellaria (pop. 6000; area, 40 sq. m.); it was like an outpost from which the Italians kept a watch on Tunis when they were hoping to inherit Carthage.

Sicily supports 3,266,000 inhabitants, on 9935 square miles, or about 298 persons to the square mile, and yet the immense grain-fields on the interior plateaus, the vineyards, the olive-orchards, and orange-groves by no means cover all the cultivable tracts. It is said that the island contained 12 million inhabitants in the palmy days of Egesta, of Selinus, of Syracuse (which now has a population of 20,000, where was once a million), and of Agrigentum (to-day Girgenti, pop. 19,000), whose citizens, according to Empedocles, "built as though they were to live forever, and feasted as if they were to die on the morrow." In this country, where there are neither farm-houses nor hamlets, one half of the nation dwells in the coast towns; the other lives in the interior, in enormous villages, more than one of which has neither fountains to water its gardens, nor forests to temper the heat of the sun, nor hills to screen it from the winds of the steppes.

Malta.—It is proper to speak here of a remarkable island which forms a dependency of England, but belongs geographically to Italy, while the lineage and language of its inhabitants link it to North Africa. Malta, 58 miles south of Sicily and 155 from Africa, consisting of a limestone rock, was, in the Middle Ages, the seat of an order of monastic knights who warred on the Mussulmans as an act of piety. They delivered thousands of Christians, they loaded thousands of Mohammedans with chains; and these latter, scattered over the island as slaves, gradually strengthened the Arabic dialect which had been brought in, some centuries before, by conquerors from North Africa.

The temperature of Malta never sinks to the freezing point. The summers are dry; in winter the winds are fierce, and very little rain falls. Doubtless, rain was more abundant and springs more numerous before the woods were cut down; but the island to-day is nothing more than a rock, divided into arid compartments by stone walls. There are no forests, no rivers, and only a few scant fountains. Soil even is wanting; the Maltese creates a few shovelfuls by pounding up the rock, or he imports a little from Sicily and plants it with cotton. There are 164,000 inhabitants here, on 95 square miles; the Maltese emigrate to Egypt, and in still greater numbers to Tunis and Algeria, chiefly to the province of Constantine. They are very useful there, not as peasants, since they settle only in the cities, but as intermediaries between the French, whose religion they profess, and the natives, whose language they speak, though with a mixture of Italian.

La Valetta (pop. 60,000), capital of the island, is a formidable fortress, like all those from which the English command the sea.

Sardinia.—Sardinia, situated a little farther from Italy than from Africa (the latter is not 125 miles distant), was called by the ancient Greeks *Ἰχνοῦσα*, because

of its fancied resemblance to a footprint. But for the narrow Strait of Bonifacio it would form one and the same land with Corsica. The plains along the shores of Sardinia are in places so swampy that the Romans made the island a place of deportation for their convicts, knowing well that a grave was dug for them there in advance. The fevers of the coast, especially in the vicinity of Oristano, in the west, are terribly deadly; as they prevail in places seemingly protected from the miasmata of the marshes, some have thought that the lead and copper which abound in the island might infect the air with mephitic exhalations.

Roughly speaking, Sardinia is a country of mountains; the highest of these sum-



A TRASTEVERINA.

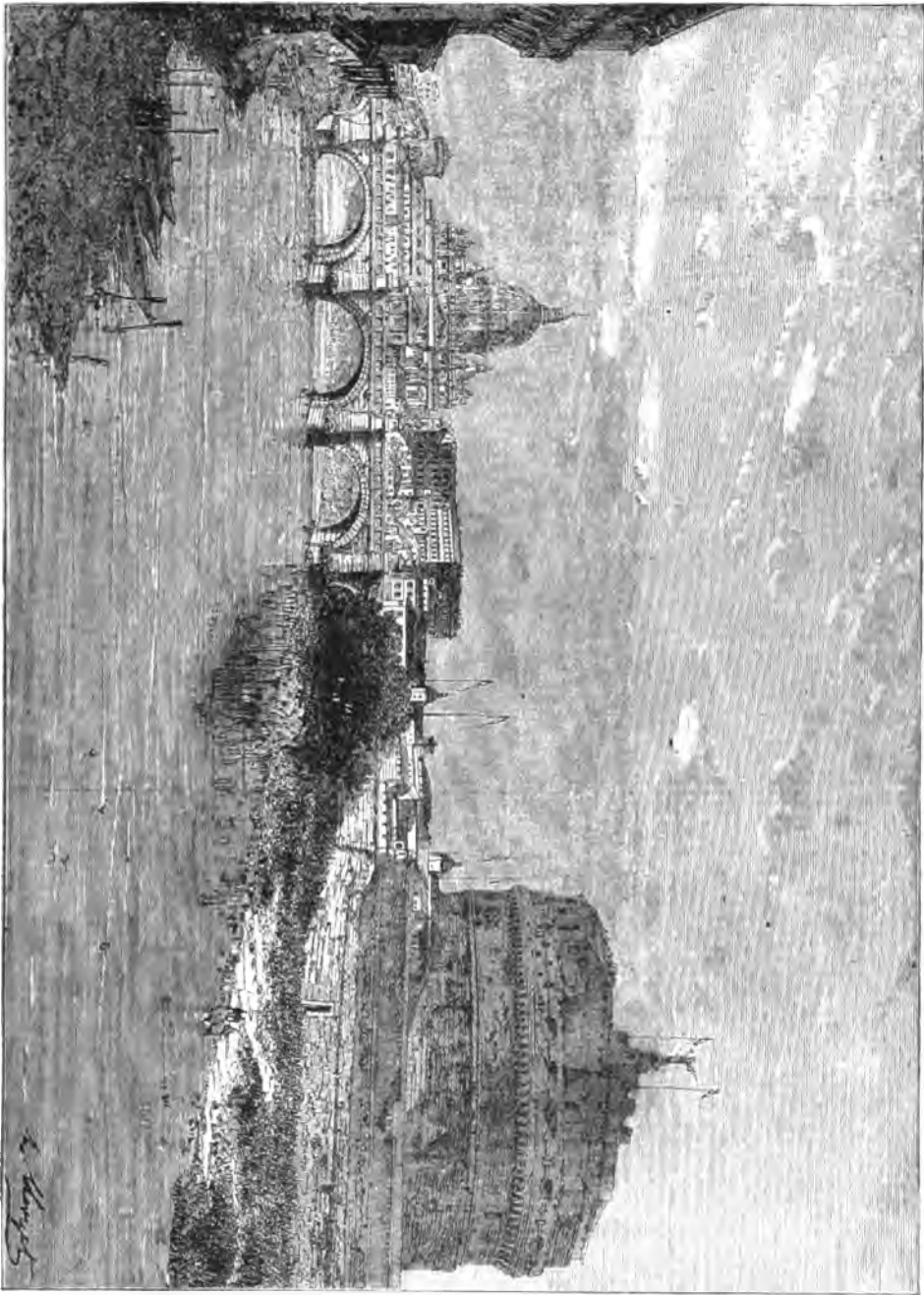
mits, Gennargentu, or Punta Florisa (6116 feet), rises under the 40th parallel of latitude, among granites and schists; while in the north of the island, in the chaotic peaks of Gallura, the Limbara scarcely surpasses 4260 feet. These mountains bear olive-groves, *maquis*, and forests which were once more extensive; they are rich with metals, which are very little worked; their waters flow down to pestilential streams, notably to the Tirso, which is longer than the others. Coast-indentations are not lacking, but ships are rare here, especially Sardinian ships, for this sea-girt land has never produced many mariners. The islanders live in cities or small market-towns, and very few in hamlets or on farms, for the reason that in this Christian

island, which has been often visited by Mohammedan corsairs (even as late as 1815), the families have grouped themselves about fortresses.

On 9300 square miles, Sardinia supports 735,500 inhabitants, or 79 to the square mile, a density only one-fourth that of Sicily. The Sardinians are of Iberian stock, but mixed with Phœnicians, Carthaginians, Romans, and exiles from all nations, with Arabs and Berbers, and, lastly, with Catalans; they are farther removed than the other Italian peoples from Celtic, Etruscan, Latin, and Greek origins; but their dialect is more closely allied than any other to the language of the old rulers of the world. Some one of the ancient peoples who inhabited the island covered it with monuments, called *nurhags*, which have been taken for tombs, but which were possibly dwellings; — upwards of three thousand of these are still to be seen. The Sardinians are of small stature, like the horses and asses of the islands. It has been said, on this score, that Sardinia can create nothing great.

The Italians. — The Italian Language. — These islands, the peninsula, and the continental trunk, together constitute “the land of Saturn, the great mother of fruits.” Italy’s beauty and wealth consist in the warmth and mellowness of her soil, the sunlight, and the copious rains, which sometimes pour 79 inches of water yearly on the lofty Apennines, and 118 on certain Alps. But the population is already overcrowded in many districts, in spite of the prodigies effected in certain sections by irrigation, and notwithstanding the patience of the peasant who elsewhere digs the pebbly soil and plants the vine and olive-tree in the rocks. From Piedmont, Liguria, Lombardy, and Emilia, from Naples, from Sicily, from all over Italy, the Italians are emigrating, at the rate of 100,000, 200,000, or 250,000 per year. This emigration is a fortunate thing for the countries where the Italians settle; for, whatever may be said of them, they are a laborious, persevering, economical people; they easily adapt themselves to the manners, the language, and all the national characteristics of the men among whom they are thrown by choice or by chance. They emigrate chiefly to France and South America; but they are to be found everywhere, principally among their Neo-Latin brothers, — in Algeria and Tunis, in Egypt, Constantinople, Brazil, Peru, and Mexico, — and also in the United States and Canada.

At two different periods of its history, this great people has dictated the course of the world’s affairs: first, under the Romans, who united it against the rest of mankind; and again in the Middle Ages, when it led the nations in industries, commerce, and the arts, and likewise in colonization. The Italian language contributes, also, to the glory of the Italians; it is sonorous, melodious, flexible, and rich. It probably has not a great future before it, as Italy lacks important colonies. Italian is split into numerous dialects: the Piedmontese is a species of Provençal; the Milanese, the Venetian, the Romagnol, the Roman, the Neapolitan, the Sicilian, and the Sardinian differ from one another widely. And it may be added that, in continental Italy especially, even the most cultivated classes of the population tenaciously adhere to the use of their various dialects. The most elegant idiom, the one which has become the organ of national culture, is the Florentine. Italian dialects are spoken throughout Italy with the exception of certain Alpine valleys, where French is the language of 135,000 inhabitants: these valleys include those extending from Mont Blanc and from the peaks of the Col of Iseran as far as Châtillon, on the Dora Baltea, and from the snows of Monte Rosa to the frosts of the Gran Paradiso; those of Bardonnèche, Oulx, and Pragelas, which open, at the foot of Mont Cenis,



ROME—CASTLE AND BRIDGE OF S. ANGELO WITH ST. PETER'S IN THE DISTANCE.

on the Dora Riparia; and, lastly, those which stretch down toward Pinerolo and Luserna, from the mountains near Monte Viso. These last furnish a refuge for the twenty thousand and more Waldenses who have guarded their Protestant faith and their liberties in the mountains, notwithstanding the terrible persecutions to which they have been subjected at different periods. Slovenian is spoken by 37,000 persons in the north-east of the kingdom, on the Austrian frontier, near Udine, in Friuli. In Naples and Sicily 20,000 have preserved the Hellenic speech of *Magna Græcia*; 80,000 retain the Albanian brought over by their forefathers when they escaped from south Albania, after the death of Scanderbeg.

All the Italians are Catholics, with the exception of the 22,000 Waldenses of Piedmont and the few Albanians in southern Italy who still adhere to the Greek faith.

Cities. — Eleven Italian cities contain more than 100,000 inhabitants.

Rome (300,000), the capital of the kingdom, the residence of the Pope, and the most renowned city of the world, lies in an unhealthful region, having a mean temperature of 59.7° F., 16 miles from the Mediterranean, on the sandy banks of the tawny Tiber. There is little life now in Rome except on great festival days. The history of a city which established a single people in the place of a hundred nations still lives here in the remains of the most solid architecture that ever existed, if we except that of the Egyptians. The Coliseum is a marvellously well preserved amphitheatre, which was capable of accommodating 107,000 spectators. It beheld for centuries gladiators, Christians, captives, and criminals struggling with lions and tigers; it beheld the light-haired man, the dark-haired, the black man, huge animals, supple felines, creeping creatures, mailed lizards,—every living thing,—either roused against an enemy or hurled on a victim. Ruins, and gardens dark with cypresses and umbrella pines, surround the Eternal City; the old walls, aqueducts, and trees extend out into the wastes of the *Agro Romano*. The *Agro Romano* is the *Campagna* of Rome,—a hot, moory, miasmatic tract, of something over 770 square miles; but the grandest memories of the world haunt this fever-stricken plain. The *Campagna* stretches eastward as far as the Sabine limestones, and southward to the mountains of the *Volscians* and the craters of Albano; countless ruins dot its surface. Everywhere rise witnesses of the past,—walls, villas, temples, avenues of tombs, paved ways, and the arches of those aqueducts through which poured rivers of water to quench the thirst of the Roman citizen.

Naples (494,000) is the most beautiful of all the Italian cities. Its beauty does not consist, like that of Rome, in the grandeur of its past, in the magnificence or antiquity of its monuments, but in the tranquillity and brilliancy of the atmosphere, the mildness of its climate (with a mean of 62° F.), in its luminous sea, and in the harmonious outlines of its bay, out of which rise the rocky islands of Procida, Capri, Nisita, and Ischia. In the vicinity of the city are a score of old craters, either dry or filled with lakes; one of these lakes, *Avernus*, of sinister name, is 394 feet deep. Mount Vesuvius, which is much higher than any of the other volcanic eminences about Naples, has an altitude of 4100 feet. Eighteen hundred years ago it ejected from its crater the flood of lava and clouds of ashes which buried *Herculaneum*, *Stabiae*, and *Pompeii*; in a few hours these three cities passed from the brilliant glow of the Neapolitan sky to the rayless obscurity of the womb of the earth. *Pompeii* has been gradually excavated, and has come back to the day. It suffered no corruption by death. Such as it descended into the shades, such it returns to the light, after eighteen hundred years of burial, with none of the mould of the tomb upon it,—its

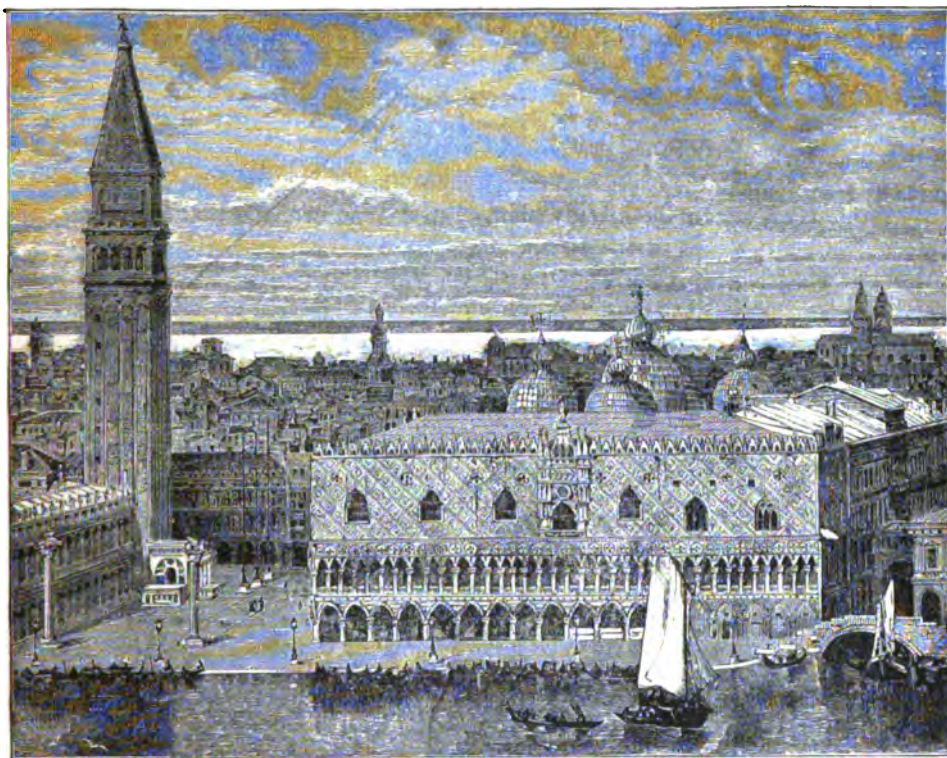
narrow streets, bordered by low houses, its cross-ways and courts, its gardens, its statues, its paintings, are all intact.

Milan (322,000), between the Alps and the Po, in a plain abundantly watered by great canals, is the largest city of Lombardy.

Turin (253,000), in Italian *Torino*, a rigidly regular town, lies on the Po, in the plain, in sight of the Alps. It is the capital of Piedmont; it was for a few years the metropolis of Italy, outranking both Florence and Rome.

Palermo (245,000), capital of Sicily, is situated on the sea-shore, in the fruitful basin of La Conca d'Oro, at the foot of Monte Pellegrino, a natural fortress.

Genoa (180,000), in Italian *Genova*, is built in the form of an amphitheatre. Its



VENICE.

marble palaces were the dwellings of a proud aristocracy in the glorious days when this city ruled the sea and commanded the Grecian Islands, the Crimea, and the shores of the Orient. A Genoese, — at least, he is said to have been a Genoese, — Christopher Columbus, discovered America; and it is from *Genova la Superba* that the multitude of Italians (chiefly from Liguria) set out to-day for the New World. It is a beautiful land that they abandon when they embark for America, intoxicated with dreams of gold. The Ligurian coast, south-west of Genoa, is a winter-resort for Europeans, a retreat for convalescents and for the aged and decrepit. The Riviera, from Genoa to Nice — Albenga, San Remo, Bordighera, Menton, Monaco — seems made to inspire the dying with the will to live.

Florence (169,000), in Italian *Firenze*, was once the capital of Italy. This city of imposing old palaces, the mother of great men, the "Italian Athens," extends along both banks of the Arno; we visit it lovingly and reverently, because of its superb monuments and art-treasures, its historic memories, and its great natural beauty.

Venice (133,000), *Venezia la Bella*, formerly ruled the Mediterranean shores, — Istria, Dalmatia, the Septinsular Republic (the Ionian Islands), Morea, the Archipelago, Candia, and Cyprus; one hundred forty palaces recall the days when the city was in the power of a formidable aristocracy. Venice is joined to the continent by a bridge of 222 arches; it rises on old dunes of the Adriatic; the alluvia of the streams would have long since filled up the shallow and turbid canals if these deposits had not been diverted in another direction. Venice is built on a multitude of sandy islets; the narrow canals, shaded by the lofty palaces, reflect in their waters 450 bridges, elegant dwellings, majestic monuments, and famed stones; and, whatever route the gondola takes, it moves ever amid reminders of a mighty past.

Messina (126,000), an enchanting city, on one of the finest sites in the world, has given its name to the strait which separates Italy from Sicily. It is the second city of the triangular island.

Learned Bologna (123,000), a university city, lies in lowlands, between the Apennines, the lower Po, and the marshy plain of Ravenna, near the fantastic torrents of Reno.

Catania (100,000), in Sicily, on the sea-shore, at the foot of Etna, has reason to fear this volcano, for it has more than once ejected its lavas on the city.

Then follow: Leghorn (98,000), or *Livorno*, a commercial city, the port of Florence, on the Mediterranean; — Ferrara (76,000), not far from the Po, and once on its banks; — Padua (72,000), in Italian *Padova*, in the plain, west of Venice; — Verona (69,000), on the Adige; — Lucca (68,000), on the Serchio, in a charming region; — Alexandria (62,000), a fortified town on the Tanaro in the Piedmontese plain; — Brescia (61,000), at the foot of the Alps, on the margin of the Lombard plain; — Bari (61,000), in La Puglia, on the Adriatic; — Ravenna (61,000), which was the chief port of the empire under the ancient Romans: it lies in a marshy plain, 7 miles from the Adriatic; — Modena (58,000), at the base of the Apennines, on an affluent of the Po; — Pisa (54,000), on the Arno: before the stream obstructed its harbor, this university city struggled with Genoa for the supremacy in the western Mediterranean.

THE SLAVO-GREEK PENINSULA.

The Balkans. — The Danube. — This peninsula, known until recently under the name of Turkey in Europe, is, like Austria, filled with hostile peoples. One of these peoples, and not the least important, the Roumanians, lives largely outside of the peninsula, beyond the Danube; but since it has for a long time shared the fate of its peninsular neighbors, since it has for centuries worn the Turkish yoke with them, we continue to connect it with the trans-Danubian States. The Chersonesus, properly so called, — for this Greek term can be applied to a region where Greek once reigned, and from which it has not disappeared, — comprises Slavs, Hellenes, Albanians, and Turks; these last are gradually disappearing; they formerly ruled the country, but

were not deeply rooted there, and the loss of their supremacy will result in the loss of nationality, whether they emigrate or blend with the other inhabitants. As for the Albanians, who perhaps had the same ancestors as the Hellenes, and over whom Hellenism is gaining, it is possible to consider them as destined to become Greeks. The term Slavo-Greek Peninsula is, then, not a misnomer; the name Peninsula of the Balkans is derived from the longest chain of mountains on its territory; the appellation Illyrian Peninsula, or Illyria, recalls the fact that the Romans thus designated the wild lands facing Italy from the other side of the Adriatic. Whatever name is



AN IMAN.

applied to it, this eastern peninsula of Europe nearly touches Asia, opposite Africa, and embraces, including Greece and Roumania, 226,400 square miles, with 19,000,000 inhabitants.

It bears no sublime mountains forever capped with snow, and its loftiest peak, the Ljubotin, in the Skhar Dag, between Uskub and Prisrend, is only 10,007 feet high. However, Europe has no rugged land; the mean altitude of the peninsula (not including Roumania) approaches 1900 feet. The chains cross each other in all directions, giving place for nothing more than lake basins, narrow valleys, and torrent gorges; forests undulate here, but they are rapidly diminishing. Pindus, Olympus.

Rhodope, Scardus, Acroceraunian peaks, Hæmus, and beyond Epirus, among the Illyrians, a tangle of mountains, which the Greeks themselves scarcely knew, — these masses of the peninsula to-day bear Turkish, Slavic, or Albanian names. The chief, though not the highest, of all these excrescences is the ancient *Hæmus*, the modern Balkan range, the bulwark of Constantinople against her northern enemies, and the rampart of old Thrace against the northern winds. This chain, which the Bulgarians love to call the Old Mountain, reaches a height of only 7795 feet in its proudest peak, Jurumtchal. It is composed chiefly of chalk, but contains also limestone and schist; its southern fountains flow to the left affluents of the Maritza; the northern go to swell the waters of delightful torrents: delightful in the mountains, but hardly have they ceased to grumble between crags or chatter over stones, when they enter a flat region which was formerly a sea, with the Carpathians on the north and the Balkans on the south; in this treeless plain of loose soil they blacken the transparent floods which they have received from the cool caverns of Hæmus. Numerous cols, for the most part difficult, cross the Balkans; one river, the Isker, pierces them; it rises in the Rhodope Mountains, among the firs, oaks, and beeches of the Rilo Dagħ (9019 feet), — the third peak in Turkey, the first being Ljubotin, and the second Olympus (9754 feet), overlooking the Gulf of Salonica; the fourth is the double-headed Kom (7996 feet), in Montenegro, near the Adriatic; and the fifth, not far away, is the Dormitor, whose highest crest the foot of man has never trod. It is a gloomy defile that guides this Isker from the ancient lake which has become the plain of Sofia, to the ancient sea which has become the Bulgarian and Wallachian plain.

The Danube, which runs parallel to the Balkans, absorbs the great rivers of the country, — the Save, the Serbian Morava, the Olt, the Sereth, and the Pruth, — and, reaching the Black Sea with the tribute of 315,500 square miles, it pours into it more than 70,000 cubic feet per second in the lowest waters, 988,700 in the greatest floods, and an annual mean of 824,150. In olden times it emptied its waters by six branches (to-day by three) into the tempestuous and perfidious lake which the ancients ironically named the Euxine Sea, that is to say, the Hospitable Sea. The northern arm, the Russian Kilia, carries about 204,800 out of the 324,150 cubic feet of the stream; the Roumanian Sulina has a much smaller flow (28,250 cu. ft.) than either of the other branches, but nature and art have made it the only navigable arm of the river, and it now has more than 16 feet of water over its bar; the Saint George's (91,800 cu. ft.) is also Roumanian. The Danubian delta, embracing 1042 square miles, is incessantly increasing by the deposits of the principal stream, which is capable of adding yearly 1480 acres to the land in 33 feet of water.

By the side of this chief of European currents the other rivers of the peninsula scarcely deserve mention. The Maritza, the ancient *Hebrus*, where the limbs of Orpheus floated, bathes Adrianople and empties into the Archipelago at Enos, opposite Samothraki; the Kara Su terminates opposite the island of Thasos; the Struma, which the Greeks called *Strymon*, drinks the superb springs of the basin of Drama; the fiery Vardar has, like the Danube, its "Iron Gate," and it is slowly filling up the Gulf of Salonica: this ancient *Axius* was, says Homer, "the first torrent in the world"; the Indje Kara Su, formerly *Haliacmon*, carries brackish waters into this same gulf; the Salamvria was the *Peneus* sung by the poets: it also flows into the little Salonican sea; the Drin is the grand and picturesque torrent of Albania: it faces another horizon, and descends to the Adriatic.



A TURKISH KAVASS.

Different Races. — Positive Nations, Negative Nations. — Out of the 19 million inhabitants of what was formerly Turkey in Europe, about 8 millions are Slavs, 5 million Roumanians, $2\frac{1}{2}$ million Greeks, $1\frac{1}{2}$ million Albanians, less than a million Turks; besides Circassians, Bohemians, Armenians, Jews, etc.

Turks, or Osmanlis. — The Turks, or Osmanlis, ruled for centuries, and until recent years, over the Slavo-Greek peninsula. It is scarcely two hundred years since this very brave, very patient, and very proud people, already master of Budapest, besieged Vienna, queen of the Danube. Europe trembled then in every limb when this nation deployed the invincible army of the Janissaries. To-day the Turk expiates, by insults and wrongs, the terror which he once inspired in the Europeans; he no longer menaces Europe, where he controlled the Danube, nor Asia, where the Euphrates was his, nor Africa, where his horses quenched their thirst in the Nile and the Shellif; even in his own peninsula in Europe, he hardly retains the shadow of supremacy. The Osmanlis are not a race, for the blood of the steppe, the Turkish and Tatar blood, mingled with Finnic and Mongolian, has long been diluted by numberless alliances with Circassian women, with Greek or Slavic Christians, with slaves and negresses; but the language which they brought from Asia into Europe has been preserved. They chiefly inhabit Constantinople and the surrounding country, some of the great cities of the empire, and, in a compact body, eastern Bulgaria, around Shumla, from the Balkans to the Danube and the Black Sea.

It is not known how many they number, for there is no genuine census, and the names Mussulman and Turk are often employed indiscriminately in this Orient, where religion takes precedence over nationality. They had already greatly diminished, in spite of the immigration of Turks from Asia Minor, which was the centre of their power and the nursery of their army, when, after their final defeats, the Osmanlis of Asia ceased to flow into Europe, and the Osmanlis of Europe began to flow back into Asia. Though not prolific, they bore alone up to that day the weight of the conscription, from which the *raïas*, or "cattle," that is, the Christians, were exempted, as unworthy of serving under the banner of the Prophet. This people, indolent in mind and body, but honest, simple, and straightforward (the ruling classes excepted), this old camp always ready for war, although war betray it, speaks a language which is used in different dialects over immense tracts in central and northern Asia, and even in Russia itself. Turkish has some ties of kinship with Hungarian, Finnish, and other so-called agglutinative idioms. Its vocabulary is extraordinarily rich, for it has been enlarged by thousands of Arabic and Persian words; when the savage horde of Osmanlis became a powerful people battling against civilized nations, they were obliged to borrow from Arabic, the religious tongue, and from Persian, the literary tongue of the Orient, all the terms of a new and vast horizon of ideas, but the grammar was unchanged, and the Turkish language remained Turkish.

Non-Turkish Peoples: Slavs, Roumanians, Albanians, and Greeks. — The Slavs, divided into Bulgarians and Serbs, live south of the Danube and the Save, from the Adriatic to the Black Sea.

The Roumanians dwell along the left bank of the Danube, in a few districts on the right bank, and in floating, disjointed groups in the interior of the peninsula, chiefly around the Pindus Mountains. The Albanians occupy the mountains overlooking the Adriatic, between the Slavs on the north and the Greeks on the south. Lastly, the Greeks possess Greece, the south of Epirus, a few sections of Macedonia, the Salonican peninsula, a portion of the coast of the Ægean Sea, and they are very numer-

ous in Constantinople. We call the Greeks, Albanians, Roumanians, Slavs, and even the Osmanlis, who are partially fixed on the soil, positive nations. The Turk was once supreme in the peninsula; his ruin dates from yesterday, and he yet rules in the capital. He tills the land at the foot of the Balkans. The rugged Albanians, until recent years, aided the Osmanlis in keeping the other nations under the yoke, not only in European Turkey, but also in transmarine dependencies of the Grand Seignior. The Greeks were settlers along the coast at least two thousand years before any one knew the name of Turk. The Slavs, who were the latest comers, are the most numerous. Lastly, the Roumanians, a people belonging from time immemorial to the plains of the Danube and the Carpathian masses, through its original element, the Dacians (?), are the true sons of the soil, although they are classed exclusively as Latins, on account of their language, and though greater importance is thus given to the Latin graft than to the sap of the primitive trunk.

By the side of these positive nations, there is a remnant of the Circassians, whom the Turks scattered through the country in order to break up the Slavic unity; and there are the nations which we call negative (notwithstanding the influence exerted by two of them), because they are not fixed to the soil, or at least very lightly so. One of the three, the Bohemian people, is principally made up of vagabonds; the other two, Armenians and Jews, are composed of cosmopolitan merchants and shop-keepers (never field-laborers), of financiers, brokers, agents, usurers, and expropriators, whom one is tempted to rank in the category of the dangerous classes. These three nations are estimated at several hundred thousand men each.

At present ex-Turkey in Europe comprises the countries subject to the Sultan of Constantinople, who is the chief of all the Mussulmans of the empire, and considered by the Mohammedans of his rite as the supreme religious authority; Eastern Roumelia (see the note on page 216); Bulgaria, a tributary land; Bosnia-Herzegovina, still regarded as under Turkish allegiance, but in reality occupied and possessed by Austria; Servia, Montenegro, Roumania, and Greece, all independent countries.

Subject lands: Roumelia. — The Bosphorus and the Dardanelles. — Constantinople.— Roumelia, formerly Thrace, extends from the Sea of Marmora and the Ægean Sea to the Balkans, and from the Black Sea to the old Rhodope Mountains, to-day called the Despoto Dag, or Mountains of the Priests, because there are so many monasteries in their wooded ravines. But since recent territorial settlements the Turks do not rule here directly, or rather they are not considered as ruling at all except in the south of the country; the north has been constituted an autonomous province, known as Eastern Roumelia; Turkish Roumelia now comprises only the lower basin of the Maritza, together with two strips of coast land, one on the Black Sea, the other on the Ægean and along the stream which separates Europe from Asia, and which is composed of three parts, namely, the Bosphorus, the Sea of Marmora (the ancient *Propontis*), and the Dardanelles, or Hellespont.

The Bosphorus is a swift, blue current which transmits to the Sea of Marmora the waters which the Black Sea has received from the Don, the Dnieper, the Dniester, the Danube, and the coast streams from the Caucasus and Asia Minor. In its course of 19 miles, its mean breadth is 5250 feet, its greatest width is 14,760, and its least, between the Fort of Europe and the Fort of Asia, scarcely 1800. It has a maximum depth of 171 feet, and a mean of 89, with a velocity of 2, 3, or even 5 miles per hour; it must carry fully 1,060,000 cubic feet of water per second; now the tributaries of the Black Sea bring to it only about 530,000. Hidden counter-currents from

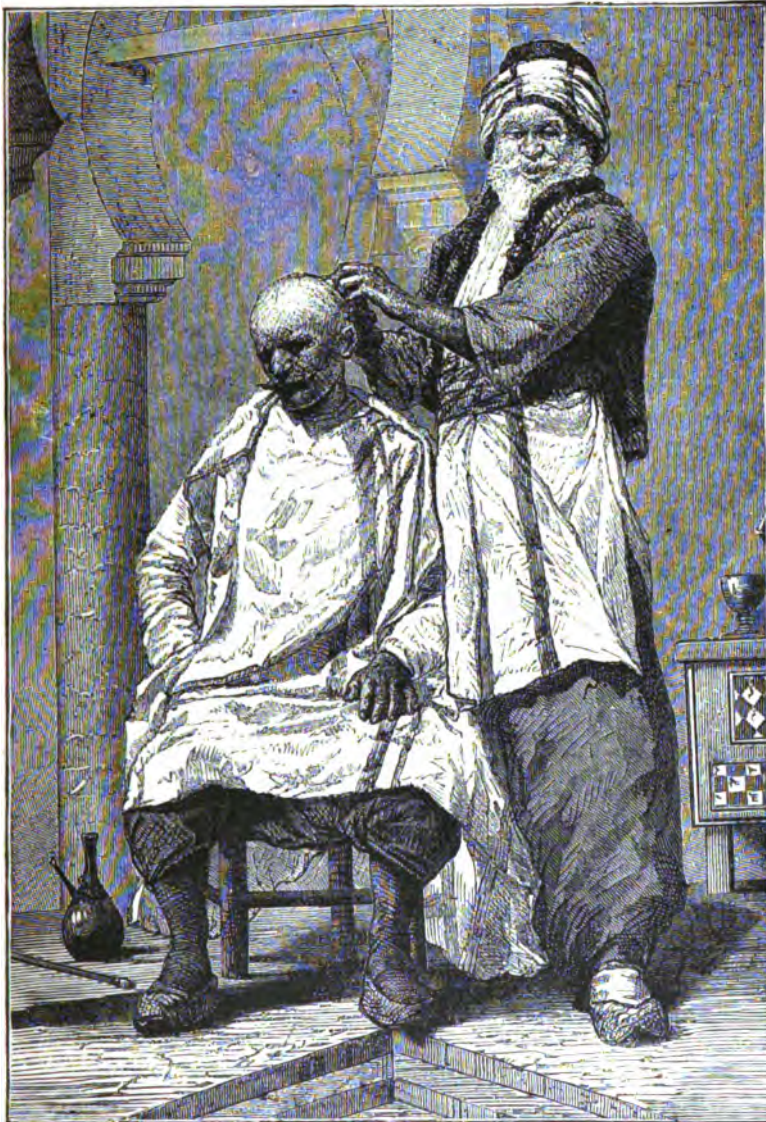
the Mediterranean re-establish the equilibrium. As the Bosphorus is the outlet of a sea, it is unnecessary to say that its waters are spotless. It is shaded by turpentine-trees, plane-trees, and cypresses clustered in groves, or in great cemeteries which are as gay as smiling gardens; palaces rise along its shores, it is magnificent, and ends magnificently at Constantinople.

Its floods are poured into the Sea of Marmora, a beautiful basin a little over 150 miles long by 50 broad; the modern name of this sea is derived from the marble island near its western extremity, called Marmora. At the outlet of Marmora, the tranquil waters, which had been converted from a stream into a lake, become once more a stream as soon as they enter the Dardanelles; here, however, the current is less rapid than in the Bosphorus: three miles and a quarter, at the most, per hour, in a channel from 130 to 318 feet deep, whose mean width is 13,100 feet; the narrowest portion (6398 feet) is between Abydos and Sestos, to-day Nagara and Maïto. It was from Abydos to Sestos that Hero's lover, Leander, swam through the turbulent water; it was near Gallipoli, the principal town on the strait, that forty Ottomans landed in 1356, mounted on tree-trunks which were bound together as a raft by strips of leather; these warriors were the advance guard of the triumphal march which brought the Turks to the walls of Vienna. The Dardanelles are 42 miles long.

Abydos, Sestos, the proud Olympus of Brusa, which overlooks the Sea of Marmora, the Granicus, which witnessed the victory of Alexander, the Xanthus, the Scamander, and the Simois, which beheld the flames of Troy, the rivers of this coast, the mountains of this horizon, and the cities of this seaboard have all exchanged their glorious Greek names for obscure Turkish titles. The Hellenes no longer reign here. Roumelia is doubtless called by a term which signifies the "land of the Romans," that is to say, of the Greeks, — for, to the barbarians who so long besieged the Oriental empire, the majesty of Rome survived in Byzantium, and the Byzantines inherited the great name of the Romans; — but this province no longer deserves its title; it is fully as much Turkish and Bulgarian as Greek, to say nothing of the Jews, Armenians, and "Franks," — peoples of every tongue and every lineage, who have stranded at Constantinople. The Bulgarians live here principally as good peasants; the Turks and Greeks are very numerous at Constantinople; the latter are also found in great numbers along the coasts and on the islands.

Constantinople, formerly *Byzantium*, the Stamboul or Istamboul of the Turks, is the capital of the empire, and perhaps the most favorably located of cities, but the climate is rough and harsh; the temperature sometimes sinks to -4° F., although the latitude is that of Naples, Barcelona, and Oporto. As soon as the north-east wind blows from the Steppe, Constantinople is transformed from a southern to a northern city, and the Bosphorus has even been known to freeze. This imperial city, "the mother of the world," as it is called by the Osmanlis, lies at the very extremity of Europe, opposite Asia, on the beautiful bay of the Golden Horn, one of the largest and best sheltered of harbors, at the spot where the Bosphorus enters the Sea of Marmora. The superb city gazes on its huge, brackish stream, on the Asiatic coast, and, far away against the sky, on the Olympus of Brusa, glistening with snow in winter; it looks out on clear waves, sails and skiffs, villas, palaces, kiosks, cypresses, and cemeteries resembling parks; but, as for itself, it is unsightly. The town contains, it is said, 80,000 wooden houses, a single story high, with tiled roofs, and possessing no external beauty; and these houses are ranged in disorderly, tangled groups along narrow, tortuous, badly paved or unpaved streets, where prowl thousands of ill favored

dogs. Out of the streets, the lanes, and blind alleys, often devoured by fire, and where the filth breeds epidemics, spring domes, baths, caravansaries, and the minarets of 5400 mosques, few of which are beautiful. The term Fanar, or Phanarion, is applied to a large quarter, peopled by Greeks, who, from early times, under the



A TURKISH BARBER.

name of Phanariots, plundered the Ottoman empire much more than did the Turks themselves. They did not spill blood in torrents, like the Osmanlis or the Albanians, but, in the numerous offices which they held under the Magnificent Sultan, they never failed to deceive, to extort, and to corrupt. Among the

suburbs which are better built, more airy, more luxurious, more "European," than Constantinople itself, we remark especially Galata, Tophané, and Pera. As for Scutari, the famous city of beautiful cemeteries, which, from a distance, looks as though built in a cypress forest, it is, in reality, a suburb of Constantinople, but a suburb on the left bank of the Bosphorus, and this left bank is Asiatic.

Does Constantinople contain 1,200,000 souls, 1,000,000, or 900,000, or only 800,000 to 850,000? If we adopt this last number, we may say that the "mother of the world" possesses 385,000 Turks or other Mussulmans, 153,000 Greeks, and as many Armenians, 50,000 Europeans, mostly Italians and French, and 45,000 Jews, more or less. An enumeration made in 1885 returned a total of 873,565.

Adrianople, the *Edreneh* of the Turks, has about 100,000 inhabitants, in part Greeks. It enjoys the rare favor of being situated at the junction of three great rivers, namely, the Maritza, the Arda, and the Tunja.

Macedonia.—Macedonia, borders the Archipelago, from the foot of the Rhodope Mountains to the foot of granitic Olympus. About fifteen mountains were called by this name Olympus, among the Hellenes of Asia, Europe, and the islands; but none was more worthy than this to bear the court of the Immortals. This Pantheon of the old Greeks, still black with forests, rears to the height of 9754 feet the loftiest of its forty-two summits, just under the 40th parallel of latitude, above the Gulf of Salonica, at the mouth of the Peneus. The brilliant home of the Greek gods marks nearly the northern limit of the Greek language, for Macedonia belongs almost exclusively to the Bulgarians and Albanians; it contains only scattered families of Greeks, except in Chalcidice, or the Salonican peninsula, which is wholly Greek.

Chalcidice, this little world apart, sinks on the north to a lacustral lowland where a navigable canal could be easily constructed, from Salonica to Stavros; on the south it terminates in three prongs: the western prong, Kassandra, faces Olympus, across the Salonican gulf; the middle one is called Longos; the eastern, Hagion Oros, or Holy Mount, terminates in the limestones of majestic Athos (6849 feet), which, at the setting of the sun, casts the shadow of Europe on Asia, beyond the "vinous" floods of Lemnos. To the people of the Greek faith, Athos is a kind of Rome or Mecca; it has 935 churches and chapels, besides monasteries, and *skytes*, or villages of hermits; on its bold promontories, in its delightful ravines, in caverns bored in the rock at giddy heights, live 6000 unthinking, ignorant Greek monks.

Macedonia is inhabited by Bulgarians on the Kara Su of the east, on the Struma, and on the Vardar; by Albanians and also Servians in the direction of Albania; by Greeks in Chalcidice, on the Haliacmon, and along the coast; and by a very few Turks. The chief city is Salonica (pop. 60,000), a port of the future, at the head of the gulf of its own name, near the mouths of the Vardar.

Albania: Shkipatars or Skipatars.—Albania, formerly *Illyria* and *Epirus*, stretches from the limestone Pindus to the Ionian Sea, from the Skhar Dag to the Adriatic. The surface is all disposed in mountains, which are mostly of chalk and limestone, in cañons and winding gorges; the country merits a hundred times its two national titles *Shkiperi* and *Malliesi*, both signifying mountain, unless, however, the first is the word *Skiperi*, or land of the eagle.¹ Some hold that the name Skipatars comes from a root signifying to understand,—a root imported in ancient times by the conquering Latins, and closely related to *accipio*;—the Skipatars, then, would be the men who understand or, rather, who comprehend each other by means of a common language.

¹ From *skipi*, eagle.

The principal cities, which are quite small, however, Scodra, or Scutari, and Jannina, are both on the shore of a lake. The Lake of Scodra (144 sq. m.) empties into the sea through the Boyanna; the great river of Albania, the Drin, passes near by. This



ALBANIAN TYPES.

latter stream formerly flowed directly to the Adriatic, but it now empties more than half of its floods into the Blato.¹ It flows between precipitous rocks, which tower to a height of 3300 feet; its source is in a beautiful basin, Lake Okhrida, which, with its

¹ This is another name for the Lake of Scodra, and is simply the Slavic word *blato*, signifying lake.

length of 17 miles, its circumference of 62, its area of 104 square miles, its blue waves, and its unrivalled transparency, ranks among the finest lakes of Turkey. Okhrida, on its right bank, was the capital of Bulgaria when the Bulgarians possessed the land of the eagle. Under the name of Black Drin the stream runs north from Lake Okhrida, skirting the Skhar Dagħ (*Scardus*); then, joining the White Drin, it flows across Albania.

The Lake of Jannina, a lagoon of no considerable depth, receives copious fountains from the rock; the two basins which form it, the Lake of Jannina and the "mud lagoon," united by a sluggish, rush-encumbered stream, discharge underground currents, called *voïnikova*; and these currents carry its waters far away to magnificent springs, which are connected with two coastal rivers, namely, the Mavro Potamos and the Arta. In the mountains near Jannina, if not at Jannina itself, are a few clumps of oaks which come from the prophetic trees of Dodona, the most ancient oracle of Greece, the spot around which lived the *Graiikoi*, whose name the Romans, little by little, bestowed upon the whole Hellenic nation. The European powers have recently decided not to unite to the Greek kingdom this city and these Suliot mountains, where so many heroes, both men and women, have died for Greek independence. In the main, the Greek element, more or less mixed with Albanians and Kutzo-Wallachians, predominates in the southern valleys of "black Epirus," the most barren portion of the Skipatar land. In the rest of the country the inhabitants are, almost to a man, Albanians; and not all the Albanians live in Albania.

The origin of the Albanians is unknown; by some they are made to descend (incorrectly it would seem) from a tribe which came from the Caucasus in the last days of the Roman Empire; according to others (and this is the prevailing opinion), they are connected with the Pelasgians, an agricultural people who trod the soil of the Greek peninsula before the Greeks themselves. These Pelasgians, who were doubtless ancestors of the Hellenes as well as of several of the autochthonous nations of Italy, have left monuments of a rough grandeur and of a solidity which defies the ages. The Pelasgic tribes retreated before the Hellenes and disappeared from Hellas, from Morea, and finally from all Italy; their language, which is thought to have had a closer relationship with Celtic than with the Greek, may have served as a basis for the Latin (?); they survived, perhaps, nowhere except in what is to-day Albania. About the middle of the fifteenth century, the Turks confiscated this region, at the termination of desolating wars, in which Scanderbeg, the great national hero, distinguished himself.

It is estimated that there are perhaps two million Albanians in all the Turkish domains of Europe, Asia, and Africa, including those who are henceforth lost to their people and their language, namely, the families which are becoming Italianized among the Italians, or Hellenized among the Greeks, as well as those in the *Arnaut keui*¹ scattered here and there over the Sultan's domains. The mass of the nation in Albania and western Macedonia forms a block of about 1½ million persons.

This million and a half Skipatars speak one of the rudest of languages; it is continually gaining new villages on the fluctuating frontier which separates it from the idioms of the Southern Slavs. The selfish, domineering, arrogant Albanian learns neither Servian nor Bulgarian, but the flexible and polyglot Slav of the south

¹ These are Turkish words, signifying Albanian villages.

learns Albanian. On the other hand, in the south, the Skipatar dialect is falling back before the advance of Greek; but is it not honor and good fortune to pass from a barbaric speech to the tongue of Homer?

The Albanians are a half-savage people, terrible in combat, restless, riotous, and born for the trade of condottieri. As they belong to *phars*, or clans, that are jealous of each other, and to hostile religions, Turkey even levied on the country for soldiers to combat national independence there; within, Albania has long been rent by her own hands, though she is much less divided now than formerly; without, she has furnished for centuries the mercenaries who were once the strong pillar of the imperial edifice.

The Skombia, a small river, divides the Skipatars into two sections: on the north there are 600,000 to 700,000 Ghegides, on the south 800,000 or more Toskides. The difference between the dialects of these two Albanias (one of which corresponds very nearly to Illyria, the other to Epirus) is as great as that between French and Spanish. The Ghegides and the Toskides hate each other cordially, and there is no more love between the Mohammedans and Christians (the latter of whom are a little more numerous than the former), nor between the Catholics and Greeks; south of the Skombia the Greek religion prevails, and on the north the Catholic.

To these "subject" lands may be added the islands of Hellenic speech: Crete, the largest and finest of these, is in the Mediterranean proper; four others, Thasos, Samothraki, Imbros, and Lemnos, lie in the Archipelago, or Ægean Sea.

Crete.—There are only three islands in the Mediterranean larger than Crete, namely: Sicily, Sardinia, and Corsica. Crete embraces an area of 3216 square miles. Within easy reach of Asia, Europe, and Africa, it was one of the old lands of Greek refinement. It was called the Crete of a hundred cities: and it is needless to say that these cities were enemies; for, as is well known, the Hellenic world was rent by intestine dissensions. The names of its republics, the mightiest of which were Gortyna, Cnossus, and Cydonia, the names of its mountains and its groves appear in almost every line of the ancient Greek poetry.

Crete (called by the Turks Candia) is covered with mountains which are much lower than the Etna of Sicily, much loftier than the peaks of Sardinia, and of about the same height as those of Corsica. Psiloriti (8038 feet), rising near the centre of the island, no longer abandons to the wind those forests, nor to the zephyrs those groves, which adorned it when it was called Ida, dear to Venus. There now remain in Crete, in the place of the stately forests of ancient times, only ragged thickets, and here and there wooded ravines, with umbrella pines, cypresses, carob-trees, oaks, and, in the west, chestnut-trees; in the plain and on the hill-slopes, which produce a sparkling wine, the olive-tree furnishes no protection from the fiery darts of the sun.

The Lasethe Mountains, in the eastern part of the island, reach an elevation of 7054 feet. In the west rise the Leuca Ori, or White Mountains, so called, not from their eternal snows, although they have an altitude of 8101 feet, but, perhaps, from their limestone, which glows white in the sunlight. These White Mountains, or Aspra Vouna, are named also the Sfakiot Mountains; they owe this title to their hardy inhabitants, the Sfakiots, who boast of being pure-blooded sons of the Hellenes. Whether they have been mixed or not with the Slavs, the Byzantines, and the Arabs, who ruled in the island in the ninth and tenth centuries, or with the Venetians, the Turks, and the Albanians who aided the Osmanlis in their work of enslavement or death, these heirs of the old Cretans have a hundred times reddened with

Mohammedan blood the streams which leap in cataracts over the rocks and the springs which gush up in the shade of the chestnut-trees. While the people of the lowlands have apostatized, they have remained Christians; and their language, perfumed by the ages, resembles the old Doric tongue, which was the most energetic and the most rugged of the Greek dialects. All the other Cretans speak Greek, even the Mussulmans, with the exception of the inhabitants of a few *Arnaud keui*.

The number of inhabitants is given as 294,000, 88,000 of whom profess Islamism. These Mussulmans are seldom found outside of the towns or far from the coast; and the Christians constitute the rural population. Much mixed (except the Sfakiots), long crushed under the yoke, and often decimated by wars for independence, all of which have been unsuccessful up to the present time, they are not sufficiently numerous, nor, perhaps, sufficiently energetic, to restore to their country its girdle of elegant cities. The capital of Crete, Canea (pop. 12,000), once *Cydonia*, faces the Leuca Ori on the northern seaboard, which is dotted with excellent harbors.

Small Islands: Thasos, Samothraki, Imbros, Lemnos. — Thasos (pop. 10,000), an island of 74 square miles, rises to an elevation of 3300 feet in its Mount Saint Elias, whose name, common on Greek soil, is a Christian corruption of the pagan name of the sun, *Helios*. Unlike the greater part of the rocks in the *Ægean* Sea, Thasos, where the rainfall is copious, is shaded by woods; these are chiefly of pines. Its Hellenic inhabitants speak a Greek which is somewhat sullied by Turkish.

Sterile Samothraki, facing the embouchure of the Maritza, in sight of Mount Athos, has scarcely the population of a hamlet; hardly 200 Greeks are grouped here on 66 square miles, around a Saint Elias, 5243 feet in altitude, composed of trachyte, and draped with oaks.

Imbros, which is much lower, since its Saint Elias reaches an elevation of only 1952 feet, rises from the waves near the opening of the Dardanelles into the *Ægean* Sea. About 10,000 Hellenes people its 85 square miles.

Lemnos, or Stalimni, equally distant from Mount Athos in Europe and the shores of Troy in Asia, flamed in the time of the Greeks. They made its now extinct furnaces the forge of Vulcan, their fire-god and the artificer of heaven; none of these volcanoes now has any importance, and Skopia, or Belvedere, is only 1410 feet high. Lemnos embraces an area of 170 square miles, with 25,000 inhabitants, nearly all Greeks, who are gaining on the Turkish element. There is very little if any shade in the island; but fountains are abundant, and the soil is rich.

These four islands were flourishing lands during the palmy days of the Hellenes, when Thasos, for example, contained 100,000 souls. They were covered then with brilliant cities, from which sprang poets, artists, and unfortunately, also, rhetoricians; they are now inhabited by merchants, fishermen, and seamen. In all four, the capital is a little town named Kastro (fortress).

All these "subject" lands comprise together something over 67,000 square miles, with 4,800,000 inhabitants, or about 70 persons to the square mile.

Eastern Roumelia. — Eastern Roumelia, or the *Autonomic Province*, depends officially upon the Sultan of Constantinople, who names its governor (residing at Philippopolis); but, in reality, it enjoys an almost complete independence. Eastern Roumelia openly aspires to a union with Bulgaria,¹ whose language she speaks, and

¹ This union has already been accomplished. The revolution of Philippopolis, which occurred in September, 1885, resulted in Bulgaria's declaring Eastern Roumelia an integral part of United Bulgaria. This accession of strength excited the fears of Serbia, and she shortly afterward invaded Bulgaria, but

to whom she hopes to bring as a dowry the provinces of Roumelia proper and Macedonia, which are also more or less Bulgarian in speech. If this could be accomplished, "Great Bulgaria" would extend from the Danube to the Ægean Sea, and from the Black Sea to the Albanian mountains.

Eastern Roumelia is estimated to cover about 13,900 square miles; it contained a population in 1888 of something over 960,000 souls. It occupies the upper basin of the Maritza, at the southern foot of the Balkans, which separate it from Bulgaria; from east to west it extends from the shores of the Euxine to the Rhodope Mountains. Statistics, strongly philhellenic; for a long time represented this country to us as purely Greek; now, documents, doubtless too favorable to the Bulgarians, represent it as first Bulgarian and secondly Mussulman. According to the latter figures, it contains 683,000 Bulgarians, 50,000 of whom are Pomaks, or Bulgarian-speaking Mohammedans, 200,000 Turks and Mussulmans, including the aforesaid Pomaks, and only about 53,000 Greeks. A great number of the latter live in Plovdiv (pop. 33,000). This city, the Felibe of the Turks, the Philippopolis of the Greeks, is the capital, on the banks of the Maritza.

Bulgaria and the Bulgarians. — Bulgaria, which is an independent state, though compelled to pay a tribute to Turkey, is striving to annex all the lands of Bulgarian speech, as well as the allogeneous elements which here and there interrupt the continuity of the Bulgarian nation. Bulgaria embraces an area of 24,700 square miles, and contains 2 million inhabitants, or 80 persons to the square mile. It stretches from the Balkans to the right bank of the Danube, a high talus with cities; while the left bank, of Roumanian allegiance, is a marshy valley, which is often inundated, and which becomes, when the waters recede, a fatal fever-laboratory. From east to west Bulgaria extends from Varna (pop. 25,000), the great Bulgarian port on the Black Sea, to the Bulgaro-Servian mountains of the Morava. The country is very fertile along the streams; it is the granary of Constantinople, and it is also one of the leading sources of the world's supply of grain.

The Bulgarian nation, numbering nearly 4 million men, is but imperfectly Slavic. Its ancestors were barbarians of Turkish or Mongolian lineage (or of the two mixed), who came from Central Asia, and settled along the banks of the Volga; they either adopted the name of this stream or bestowed their own upon it. Crossing the Danube in 679, these conquerors buried themselves among a Slavic people, which they ruled, but which taught them its language and denationalized them. They are laborious, prolific, peaceable, fond of country life, and pass for a herd of rustics; they have, on the contrary, a talent for industrial pursuits, and a keen, discriminating relish for the arts. They are insensibly gaining ground (except on the Albanians), and already they have annexed many valleys where the Greek tongue once echoed, and where now we scarcely hear anything except Bulgarian; this Slavic idiom preserves a few traces of the language spoken by the *Volgarians* when they quitted the Volga for the Danube. The greater part of these Slavized people profess the Greek faith; the others are either Catholics, or, under the name of Pomaks, have submitted to Islamism.

It is estimated that among the two million inhabitants of free Bulgaria, the Bulgarians count for more than two-thirds and the Turks for more than a quarter.

was decisively defeated. The indignation of Russia at the creation of a strong state in the Balkans led to her instigating a movement whereby Prince Alexander was deposed, and the same influence has prevented the confirming a successor. — Ed.

The latter, who are less numerous than before the Russians crossed the Balkans, are still concentrated in large number around Shumla (pop. 23,000), in eastern Bulgaria, north as well as south of the highlands, as far as the Black Sea, and almost to the Danube. Their number exceeds 500,000, in spite of the emigration which swept them away in frightened crowds, when their hereditary enemy at length made himself master of Plevna, and held in his grasp the destiny of the old Osmanlis. In order to break up the unity of the Bulgarian element and strengthen the Turkish, the imperial government had thrown among them, by tens and even by hundreds of thousands, Mussulmans fleeing the Russian hegemony, Circassians escaped from the Caucasus, and Tatars from the Crimea. These last were peaceable settlers; the others were idle, rapacious, and violent, accustomed to slaughter an enemy or a passer-by, and to sell their daughters for the harems of the good Osmanlis. But most of these are dead or dispersed; the rest are slowly becoming Bulgarianized.

When the Bulgarians were at the height of their power, their Czars and their bishops resided in Tirnova, a remarkably picturesque city, traversed by the Iantra, which flows into the Danube. Praslav was the capital before Tirnova; nothing now remains of Praslav but a few ruins, near Eski Stamboul, not far from Shumla; before Praslav was the capital, the princes inhabited Okhrida. To-day the parliament sits at Sofia (pop. 30,000), the central city of the Slavo-Greek Peninsula, on the Isker, an affluent of the Danube, at an elevation of 1755 feet, at the foot of the Vitosh (7644 feet), a mountain often capped with snow.

Bosnia-Herzegovina.—Bosnia-Herzegovina and the sanjak of Novi-Bazar are ranked among the provinces of Austria, but the government of Constantinople has titular dominion and administers the last civilly. The three provinces, fertile Bosnia, sterile Herzegovina, and the sanjak of Novi-Bazar, add to the double-headed empire 22,840 square miles, with 1,404,000 inhabitants. Nearly two-fifths of these are Mussulmans; something over two-fifths profess the Greek faith; the others are Catholics. All speak Servian; they are Yugo-Slavs in feeling, and might hope for a union with Servia; but, unfortunately, the hatred of the Greek for the Catholic, of the Catholic for the Greek, and of both these for the Mohammedan, prevents the Slavs of Serbic origin from resolving themselves into a single nation.

Mountains quite like the Juras cover Bosnia; they have the same subterranean chasms common to all limestone and chalk regions; the transparent river which gives its name to the province, the Bosna, a tributary of the Save, springs from the foot of a mountain, already a full-grown river. Notwithstanding the character of the surface, the country is fresh and green along the banks of the streams and near the fountains. "Where the trees begin and the stones end we enter Bosnia," says the Dalmatian, who himself lives on the rocks. Mighty forests still cover one-half of the country, but these will be felled as soon as roads make them accessible. They shelter the fox, the badger, the wild-cat, the wolf, the lynx, and the bear. The great Bosniak city, the Damascus of the North, as the Turks call it, on account of its gardens, is the little town of Bosna Serai, with scarcely 26,000 souls, almost all of whom are Mussulmans; it lies on a tributary of the Bosna. The former capital, Iatsec, is a much more picturesque town, situated in a gorge where the Vrbas, an affluent of the Save, receives from the top of a tufa rock the cataracts and cascades of the Pliva.

Herzegovina was restive under Turkish rule, and it was there that the revolt broke out which, instead of delivering the Slavs of Bosnia-Herzegovina, handed them over to

Austria. The Christian Slavs (with Mussulmans in the towns) occupy arid plateaus, dry, bald mountains, and gorges, where the torrents run down to the Narenta, a tributary of the Adriatic, or filter into the fissures of the limestone, or disappear into a *ponar*, or swallow-hole. These lost waters, for the most part, reach the elongated sea which separates Turkey from Italy, for they issue in magnificent fountains along the Dalmatian coast, a few leagues, or a few steps only, from the waves which are to engulf them — or even beyond the shores, under the sea, like the submarine fountains of Cattaro and Doli. This Dalmatia, an Austrian province, which, with the exception of certain Italian colonies, is also inhabited by Yugo-Slavs, is nothing more than a narrow strip of land, and from the Herzegovinian crest of the jagged, sterile Alps one sees the blue waters of the Adriatic as though at his feet. The Trebenitsa, the chief river of the country after the Narenta, is supposed to form, on the other side of the mountains, the superb source of Ombla, near Ragusa, and also that of Doli, which gushes up from the sea-bottom. Mostar, the capital, on the Narenta, is a small and lifeless town having neither industries nor commerce.

Servia and the Serbs. — Servia has an area of 18,765 square miles, with a population in 1891 of 2,157,477. The country owes its independence to two peasants, Black George (Karageorge) and Milosh — one a miller, the other a swine-herd. Since their time, that is, since the first quarter of the century, the other Yugo-Slavs of Serbic speech, Bosniaks, Herzegovinians, Dalmatians, Slovenes, and Croats, all regard Servia as the nucleus of that "Great Servia" which patriots dream of restoring on the Danube, the Save, and the Drave; — in other words, they hope for the revival (within the limits of the possible) of the traditional empire of Dushan; under this monarch the Serbs ruled over vast territories in the Balkans and along the Danube, and the Emperors of Byzantium trembled before them. Their blood-stained history, the recovery of their liberty, their sonorous language, heroic poetry, and superb popular songs give the Serbs a distinguished place among the Slavs.

Mountains which, on the southern frontier, reach the height of 6207 feet (the altitude of Kopaonik); forests so deep as to give rise to the proverb, "If I were a wolf, I would live in Servia, nowhere else"; among these forests the Shumadia, where national independence had its birth; oak woods with great herds of swine; brimming torrents running to the Drin, a tributary of the Save, and to the Morava, a large affluent of the Danube, — such are Servia's striking features.

One of the chief charms of the Servian country, and of all Yugo-Slavic lands, consists in the fact that the town has not yet sapped the life of the rural districts; Servia has but few cities, and these are very small; the mass of the nation is distributed in hamlets; and among the Slavs of the south the hamlet is a *Zadruga*, a group of families, an assemblage of kindred and friends, who remember their common origin and consecrate it by a community of interests. Outside of the governmental seats and commercial towns, Servia is split up into a multitude of infinitesimal republics, ruled in patriarchal fashion by the oldest or the most capable. But the Zadrugas are disappearing now that the Serbs are beginning to prefer Belgrade and the big market-towns to the simplicity of the village.

Of the 2,157,000 inhabitants of the kingdom, there are possibly 1,550,000 to 1,700,000 Serbs, and 250,000 to 350,000 foreigners, about 30,000 of whom are Bohemians, 60,000 Bulgarians, in the way of becoming Serbized, and 175,000 to 250,000 Roumanians in the eastern mountains, between the Morava, the Timok, and the Danube: the latter are not Slavizing, in spite of the schools; it is not easy to assimilate the people of Trajan.

It is, then, to the Serbs of Servia that all patriots look who desire to reconstruct the ancient Yugo-Slavia, — those south of the Save, the Bosniaks, Herzegovinians, Dalmatians and Morlaks, the people of Istria and Carniola, as well as those north of this river, the Croats and Serbs of Croatia, Slavonia, and Hungary. But how to make of Greeks, Catholics, and Mohammedans one compact nation, is the question. Still, “*Sama sloga spasiva Srbi!*” — “Union alone can save the Serbs!” They speak the best preserved of all the Slavic tongues, an idiom closely allied to that into which the Bible was first translated for the use of the Slavic-speaking tribes. It is a strong, full, sonorous language, abounding in desinences, and called Church Slavonian. It is uncertain whether this dialect, the first one of the family to be fixed by a literary work, was spoken in Servia, Mæsia, Carniola, or elsewhere, but, in any case, it was among the Yugo-Slavs; it is incorrect to rank it as the parent of the Slavic idioms; it is only an elder brother. The Serbs belong to the Greek Church.

The capital of Servia, Belgrade, is an unpretentious city of 42,000 souls, at the confluence of the Danube and the Save.

Montenegro. — This land, perhaps, owes its Italian name of Montenegro, signifying Black Mountain, to ancient fir-forests; but to-day the term is a misnomer, for firs and oaks are rare, the country is dull or gray, and, in certain limestone regions, of a brilliant white in the broad sunlight. The Slavic inhabitants call it Tsrnagora, and the Turks Kara Dag, words which likewise mean Black Mountain.

It is a famous eagle's nest, an eyry nearly doubled since the victories of the Montenegrins over the Turks during recent wars in the East; and yet the Black Mountain embraces only 3486 square miles of territory, with 236,000 inhabitants. This mass of ragged limestones, backed against the two rival peaks of Kom (7996 feet) and Dormitor, is a chaos of rent rocks, of naked buttocks, and dry gorges. Here and there a blue stream darts from some large fountain, but it soon enters the earth, or rather the stone, for at least that part of Montenegro which constituted Tsrnagora before the annexations has little soil that can be turned with the plough. All the high land is so amazingly arid, rough, and barren that it possesses not more than four cultivable fields, having an average width of five-eighths of a mile. The potatoes, barley, oats, and corn grow as best they can in the little dirt that the storms have washed down into a hollow, or on some strip of thirsty alluvium, most often not more than 10, 15, or 20 feet long. It is a fortunate thing if the seed thus planted is not swept away by savage gales; the hurricanes here are so powerful that they uncap the cottages exposed to their fury, unless the Montenegrin covers his roof with heavy beams, and fastens these down by big stones. A few ravine valleys and pasture-wastes, thin, short, withered grass, clumps of bushes, and scattered trees twisted by the winds, constitute all the fortune of the Montenegrin of the mountain-tops; the lowland Montenegrin, near Lake Scutari, suffers less from the raging of the winds; he lives in a milder climate, and has meadows, glens, and genuine forests; it is not he but his brother on the summits who says that God descended one day from heaven with a sackful of stones to distribute equitably over all the valleys of the world, but the sack burst over Montenegro.

The capital of these Serbs who have never yet been subjugated is Cettinje, a town of 1500 inhabitants, at an elevation of more than 3600 feet.

Roumania: The Great Plain and the Carpathians. — **The Roumanians.** — After the battle of Plevna, the Roumanians, who had just saved the Russians from defeat,¹ saw

¹ On the outbreak of the Russo-Turkish war in 1877, Prince Charles of Roumania, acting under constraint, consented to allow Russian forces to cross his domains: the Porte, refusing to acknowledge that

themselves stripped by these same Russians of the fertile Bessarabian districts which they possessed beyond the Pruth, and in exchange they received the Dobrudja, a sterile and pestilential tract between the Danube and the Black Sea. By this forced exchange Roumania gained a little at least in area, for she now has nearly 50,000 square miles, with 5,500,000 inhabitants. The country is composed of two former grand-duchies, once governed by *hospodars*, namely, Wallachia, or the country of the Vlachs, extending south of the Carpathians as far as the broad Danube; and Moldavia, lying east of these same mountains, along the Sereth, as far as the Pruth.

Roumania possesses all the lower course of the Danube on the left bank, the right bank being Servian and Bulgarian as far as the confines of the Dobrudja, at which point the whole stream becomes Roumanian. The principal river which the Danube receives in the 528 miles of its Wallachian journey — after the Moldavian Sereth and the Bukovinian, Moldavian, and Bessarabian Pruth — is the Olt, which flows from the high plains of Transylvania through the defiles of the Red Tower.

The immense Wallachian plain sends its share of grain to the Occident, when the crops escape the ravages of the locusts. Ascending the sluggish rivers shaded with poplars and willows, we reach the Vineyard, and beyond the Vineyard, those Carpathians which give Roumania a mean elevation of 925 feet, notwithstanding the vastness of the lowlands. There, without losing sight of the fruitful plain, we wander through charming mountains, Alps destitute of lakes and glaciers, along clear torrents, among woods of white birches, black firs, chestnuts, beeches, and oaks, with caverns still inhabited by bears. The loftiest summit, Negoi, near the sources of the river of Bucharest, rises to an altitude of 8343 feet, not far to the south-west of Fogaras, the Transylvanian city around which, it is said, live the Roumanians of purest blood.

Hardly a half of the Roumanians live in Roumania itself; the rest occupy the greater part of Transylvania, various Hungarian districts, and the south of Bukovina, in Austria; vast territories in Bessarabia and Podolia, in the Russian empire; a few districts in Servia, and some villages in Bulgaria; lastly, certain mountains and valleys in the Slavo-Greek Peninsula, especially about the Pindus Mountains, where they are known as Wallachians, Macedo-Wallachians, and Kutzo-Wallachians, and also as Zinzars, from their lisping fashion of pronouncing *zinz*, the Roumanian word for five. It is supposed that this race was formed during the last centuries of Roman supremacy, by a mixture of Dacian or other tribes with Italian and Gallic settlers transported to Dacia by Trajan, after the conquest of the plains of the tawny Ister. As for the Macedo-Wallachians, they come (according to certain authorities) from the Latin colonies which Aurelian transferred from Dacia to Moesia, when, on the decline of the Empire, he was compelled to abandon what is now Roumania to the warrior nations from the north, and adopt as a northern boundary the stream which Trajan had crossed.

The Roumanians are of the Greek faith. They speak a dialect totally unlike the surrounding Slavic idioms and the Hungarian; at the same time it is nearly related to the Latin tongues; Slavic roots are by no means lacking, for the Church Slavonian was the religious and literary language of the nation down to 1643, but nearly all the

the action of Prince Charles was forced upon him, declared the Roumanians rebels. Thereupon, the Roumanian government decided to render active service to the Russians. A Roumanian division of 32,000 men took part in the siege of Plevna; the soldiers distinguished themselves by their heroism, and the successful attack made by the Roumanians on the Grivitza redoubt was the turning-point of the war. — Ed.

essential words are of Latin origin, and Roumanian writers are now rejecting Slavic words as far as possible, and replacing them with words from the Neo-Latin vocabulary. Roumanian is distinguished from the other Neo-Latin languages and *patois* by its Slavic roots, and also by Greek roots, which were woven into its fabric at the



BULGARIAN MENDICANTS.

time when the country was drained by the Phanariots. Lastly, about 200 words of uncertain parentage may be the legacy of the old Dacians or of aborigines unknown to us. The Roumanian language must have been of vigorous stock to withstand the assaults of the Slavic tongues and of Greek, to say nothing of the inroads of the Turk-

ish. It is spoken by a nation obstinately tenacious of life; encamped on the highway of the peoples, along the Danube, between the Balkans and the Carpathians, it seems as if it would have necessarily foundered in the sea of Goths, Visigoths, Gepidæ, Alans, Huns, Magyars, Tatars, Turks, Byzantines, and Yugo-Slavs, — a sea long agitated, and which to-day even has hardly become tranquil. But the Roumanians were never torn from the soil, or, if they were, they took root again — no one knows when, nor where, nor how; whether they descended out of the north, from the Carpathians, or out of the south, from the Pindus or the Balkans, they once more have the supremacy, and now number eight or nine millions, almost in one compact body. Most unfortunately, however, these millions are not all under the same government. Their best reserve of men is in Austria, and millions of their acres are under the heel of the Russians.

The race is southern in appearance, handsome and graceful, and the women are charming; but, in Roumania at least, the people are sunken in poverty, extenuated by fever, emaciated by their diet of *mamaliga* (or corn porridge) and by 194 days of church fasts each year. The climate is, moreover, very harsh, ranging from torrid heat in summer to Siberian cold in winter, when an implacable north-east wind prevails. But quitting the plain, and especially the swampy shore, if we travel toward the Carpathians, we find nature more clement; on the mountains and the vast plateaus, the Roumanian of Transylvania is vigorous and prolific, and incessantly repairs the losses suffered by his brothers of the low Wallachian districts.

Fully an eighth of the inhabitants of Roumania are not Roumanians: by the side of the people of Trajan there are 300,000 or 400,000 Jews, chiefly in Moldavia; this element is composed for the most part of money-lenders, innkeepers, and agents. There are fully 200,000 Bohemians who are fixed to the soil, and who are becoming Roumanianized; 80,000 to 100,000 Slavs, mostly Bulgarians, are likewise Roumanianizing, as are the Tchangos, or Hungarians, who long ago settled in Moldavia, and the Magyars of Hungary and of Transylvania, who descend into Roumania to seek work in the cities.

The capital, Bucharest (pop. 222,000), at an altitude of 295 feet, on the Dimbovitza, a muddy sub-affluent of the Danube, is a medley of palaces and hovels. Yassy (pop. 90,000), the old metropolis of Moldavia, is on a tributary of the Pruth. Galatz, a port of the lower Danube, between the Sereth and the Pruth, has 81,000 inhabitants.

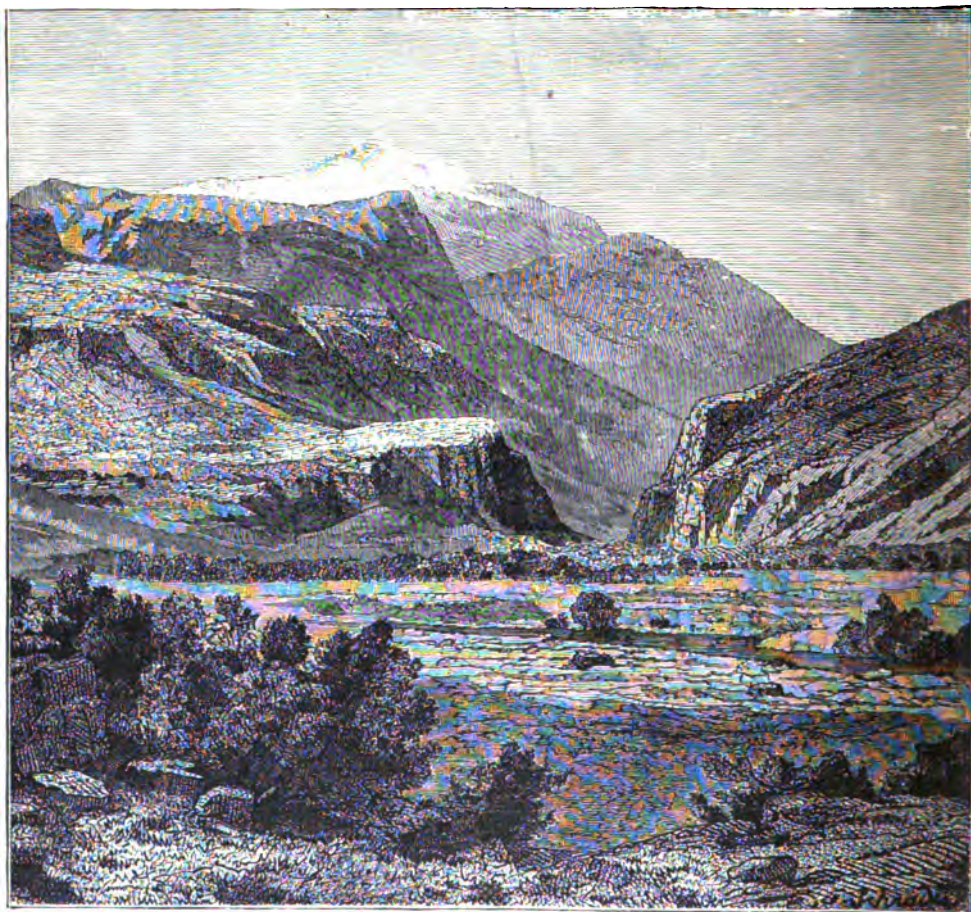
GREECE.

Ancient Hellenia. — Within recent years Greece has seen two of her ambitions realized. England has restored to her the Ionian Islands, and Europe has compelled Turkey to surrender to her the greater part of Thessaly and a small part of Epirus; but neither Europe nor England will give her Constantinople, nor the broad Thracian and Macedonian valleys which she covets.

These annexations carry the area of Greece to 25,041 square miles, and the population to 2,187,000 souls, or about 87 persons to the square mile.

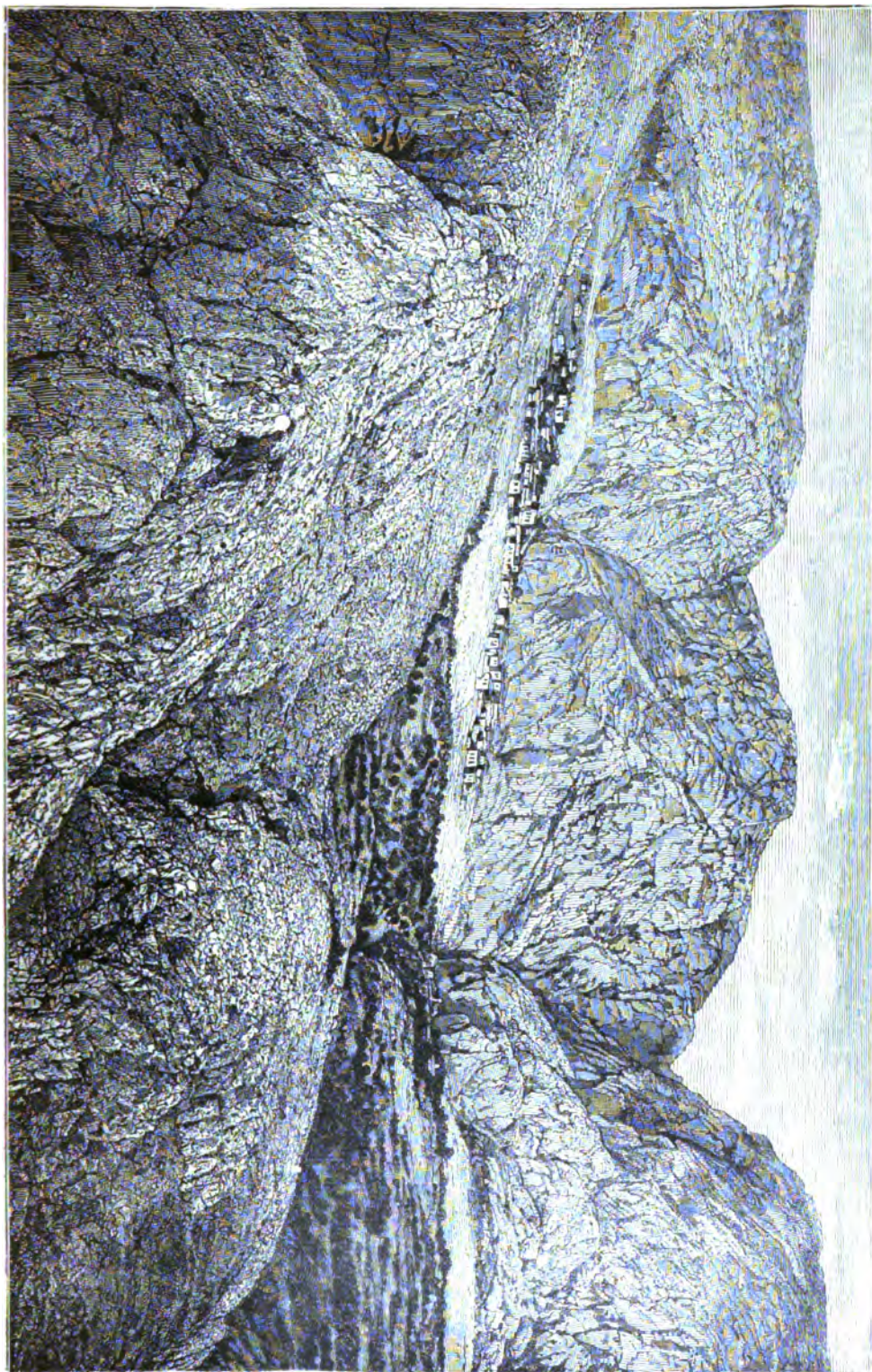
Stripped of her woods, defaced, and calcined, Ancient Hellenia has been bereft of her fruitfulness as well as of her glory. Of the Greece of other times, the traveller

finds to-day the olive-tree extolled by Sophokles as the tree, unplanted by hand, which no army-leader, young or old, could bring to nought, for the eyes of vigilant Minerva ever protected it. He sees, too, what man is powerless to rule or to blight, clear skies, warm sunlight, blue seas, and harmonious lines. But the beautiful cities have nearly all disappeared, leaving only an imperishable memory, a few symmetrical marbles, walls, and fragments of edifices, and here and there temples, citadels, and porches, — monuments which the centuries have respected.



PARNASSUS.

Greece possesses as yet only a part of the continental territory and of the islands which have retained the Greek language; a half, perhaps, of the nation speaking Romaic, or Modern Greek, lives outside of the kingdom, from Salonica to Cyprus, and from Constantinople to Crete. The Greece of to-day is a feeble remnant of what the Hellenes once occupied; for this colonizing people planted little Hellenias on most of the shores of the Old World: in Thrace, in Macedonia, on the Adriatic, in Sicily; in southern Italy, which took the name of Magna Græcia; in Provence, in Cyrenaica, in lower Egypt, in all the islands of the eastern Mediterranean, in Asia Minor, and as



A VIEW OF DELPHI.

far even as in Bactriana. These colonizations were effected in three different periods: from 1120 to 1000 B. C., the Greeks settled chiefly in Asia Minor; from 750 to 650, they peopled Magna Græcia; after the conquests of Alexander, they distributed themselves, sporadically, it is true, over the vast Orient and through Egypt. Hellenic genius was resplendent in Cyrene, Tarentum, Syracuse, Pergamum, and Alexandria as in Athens and Corinth; later on, it was a Greek colony, Byzantium, that guarded the treasury of ancient wisdom. Greece, moreover, was Rome's instructor; she influenced the Orient by her arts and her philosophies, as Rome swayed the Occident by her arms, her law, and her policy of centralization.

Greece comprises a continental trunk, a peninsula, and certain islands.

Hellas, or Continental Greece.—Hellas embraces a little less than 12,830 square miles, with perhaps 900,000 inhabitants. The Ægean Sea (which the Turks name the White Sea), the Ionian Sea, and the Gulf of Corinth bathe this small country, which is divided into four nomes, namely, Thessaly and Epirus, Acarnania and Ætolia, Phthiotis and Phocis, Bœotia and Attica.

Thessaly.—Thessaly is the land of the old Greek legends. There the Titans piled Pelion (to-day, Zagora, 5131 feet) on Ossa (to-day, Kissovo, 5249 feet) to make a pathway to heaven; there lived the Centaurs, half horse, half man; and from there the Argonauts set out to recover the golden fleece.

Thessaly extends from the Gulf of Salonica to the Pindus Mountains, from whose pine-clad, beech-grown masses the Adriatic can be seen. This country, which was Greek when swift-footed Achilles reigned at Larissa, and when Xerxes forced Thermopylæ, and when Philip and Alexander traversed it to conquer Athens or Thebes, is Greek still, and it is just that it should have a place among the provinces of the Hellenic kingdom. Its stream, the Salembria, is the ancient Peneus; rising in the Pindus range, the Salembria enters a region where the rocks have been wonderfully carved by the elements, and where monks of the Greek faith have built their monasteries on the most inaccessible peaks, bastions, needles, and pillars of a stone desert; there, "meditating," sleeping, muttering their prayers, each in his own retreat, they have no communication with the rest of the world, except by means of a long cord; bread, wine, and water, as well as their visitors, are hoisted to them by a windlass. The Peneus retains the transparency of its limpid fountains in the great Thessalian plain, the most fruitful region that Greece now possesses. Issuing from the plain, it makes a picturesque path for itself between the red rocks of Olympus and Ossa, at the spot where an earthquake at some time must have opened the gap which drained the waters from the lake that once covered the plain. This pass of the Salembria, the Lykostomo, is the Vale of Tempe, sung by the Greeks, and later, in imitation of them, by the Latins, as the most beautiful spot on earth.

The inhabitants of Thessaly are Greeks—Greeks, however, crossed with Slavs and Kutzo-Wallachians.—Turks are numerous in the cities, around Ossa, and especially in the plain; but these are fast Hellenizing, at least as to language. The Macedo-Wallachians are likewise being gradually denationalized by the Hellenes. Larissa (pop. 13,600) ranks first among the Thessalian towns.

Greece Proper.—The rest of continental Greece seems made by nature for small, rival tribes rather than for a great, united people; it is a confused net-work of mountains from 3000 to 8500 feet high, all of which have lost their old mellifluous names. Khiona (8238 feet) is a little higher than Parnassus; Parnassus (8068 feet), to-day Liakhura, overlooks the Albanian village of Kastri, once Delphi, the famous oracle

and "umbilicus of the world"; the mountain where old Hercules uprooted the pines for his pyre, *Œta* (7060 feet), whose oak-forests look down on *Thermopylæ*, has taken the name of *Katavothra*; *Helicon* (5738 feet), near the Gulf of Corinth, is called *Palæo Vouno*, or Old Mountain, a Modern Greek term, and *Zagora*, a Slavic term. *Cithæron* (4626 feet), south of *Thebes*, is named *Elatea*. *Parnes* (4616 feet), *Pentelicus* (3639 feet), and *Hymettus* (3369 feet) are three other famous mountains.

The nome of *Acarnania* and *Ætolia*, north of the Gulf of Corinth, in striking con-



THE PLAIN OF ARGOS.

trast to Attic and Bœotian Greece, is a land of verdure; it extracts from the mountains, the leafy forests, and the lakes, enough water to feed genuine rivers; here is the swift *Aspro Potamo*, the ancient *Achelous*, a stream which is abundant at all seasons, and which was the largest in the kingdom before the annexation of the *Peneus*. It receives, through a marshy emissary, the waters of *Lake Vrachori*, formerly *Trichonis*, a sheet 31 miles in circumference. The *Ætolian* and *Acarnanian* pasture-grounds are covered with flocks, and the stalwart inhabitants of this rough country dispute with the *Mainots* of the *Peloponnesus* and the *Sfakiots*.

of Crete the glory of having but slightly mixed the Hellenic blood with that of other peoples.

Phocis lies on the channel of Talanti, which leads to the eastern sea, and on the Gulf of Corinth, which communicates with the western. Phthiotis is the fresh basin of the river Hellada, formerly the Sperchius, which, by depositing its alluvia in the gulf at its mouth, has made the slender strand of Thermopylæ, where it was impossible to pass except in single file, a plain where armies can encamp.

Bœotia, like Phocis, extends from sea to sea; it contains Thebes, and also a part of Copais, a lake of 55 to 100 square miles (according to the season), which bears the Slavic name of Topolias, or Lake of the Poplars. The Copais, which is about to be drained, is in a low region, dominated from a distance by the vertical rocks of Mount Ptouni, and by Parnassus and Helicon; the Cephissus and the Hercyna, cool, crystal streams, flowing from the fountains of Lethe and Mnemosyne, pour their floods into it; the lake is drained through twenty-three chasms, called *katavothras*, in the limestone mountains.

Immortal Attica, the country of Athens, between the Ægean Sea and the Gulf of Corinth, forms a peninsula which is joined to Morea.

The Peloponnesus, or Morea: Arcadia.—The Isthmus of Corinth, which welds Attica to the Peloponnesus, or Morea, will, at no distant day, be pierced to establish communication between the Ionian Sea and the Ægean. The canal is already begun, and will soon be finished. There are no mountains to be bored, as in Central America, no vast sands to be excavated, as at Suez; the chains of Hellas are not joined to those of Morea, but there is a depression in the isthmus only 131 feet above the sea, and from gulf to gulf the distance is not more than 3 miles.

A little old market-town at the root of the isthmus, at the base of the Morean mountains, is Corinth, which once contained 500,000 souls, or as many as all Attica and three or four times as many as Athens under Perikles. The gulf to which it has given its name, and which is also known as the Gulf of Lepanto, stretches between Hellas, on the north, and Morea, on the south; it is 78 miles long, 6561 feet wide at the entrance, and 22 miles across its broadest part; on the north, as on the south, rise rigid, lofty mountains. Lepanto opens into the Ionian Sea, through the Gulf of Patras, on which tragic Missolonghi is situated.

Morea embraces about 8570 square miles, with scarcely 800,000 inhabitants, but what names, what memories! Opulent Corinth; ancient Argos, whose name the Greeks bore; Epidaurus and the sanctuary of Æsculapius; old Sicyon, the mother of painters; Træzene; Tirynthus, whose Cyclopean walls are 49 feet thick; crime-laden Mycenæ; Mantinea, in a lowland of the interior of the peninsula, the scene of great battles; Tegea; Orchomenus, powerful in heroic times; invincible Sparta; indomitable Messene; Pylos, the city of wise Nestor; Pisa, Elis, Olympia, the grove of Nemea, the marsh of Lerna, the lake of Stymphalus, the Alpheus, the Eurotas, the Styx; Lycæus, Mænalus, Taygetus, and Erymanthus.

The old island of Pelops does not certainly owe its name of Morea to its resemblance to the leaf of the mulberry-tree (*μοῦρεα*, in Greek); neither is Morea the Slavic word *more*, the sea. The name probably is derived from that of a fishing hamlet, *Mourja*, on the coast of Elis. With a mean elevation of 1969 feet, the Peloponnesus rears as many and as great mountains as Hellas: the ancient Taygetus, the modern Saint Elias, also called Five Fingers (Pentedaktylon), because it is composed of five slender mountains, reaches an altitude of 7900 feet; Cyllene, now Ziria, 7881 feet;



THE PASS OF THERMOPYLÆ.

Khelmos, in the Aroanian Mountains, 7746 feet; Olonos, formerly Erymanthus, 6949 feet; Mænalus, covered with the "shrill-voiced grove and vocal pines, where the shepherd sings his love," is not as high; Parnon, which has adopted the name of Hagios Petro, attains an elevation of 6355 feet; Diaforti, once Lycæus, is 4659 feet above the sea.

These buttocks and peaks are composed of schists, marbles, and limestone, which are pierced with katavothras. But for these chasms most of the valleys on the plateau would be occupied by lakes or mephitic swamps; but the waters of the interior flow down toward the sea through the katavothras, and spring up in superb *kephalarias* near the shore or in the very bosom of the ocean. Mantinea, Tegea, Stymphalus, Orchomenus, Pheneus, names so grand in books, towns so insignificant in the valley where their legends originated and where their history was made, are situated in depressions of this sort, on the high plateau of Arcadia, so extolled by the ancients as being *par excellence* the home of happy, simple shepherds. But perhaps these lovers of the groves, the grass, and the springs, these swains whose pipe enchanted the echoes, were, as to-day, coarse peasants seeking through emigration relief from poverty as well as from the fevers of the plateau.

The largest of these swampy lakes, which fill and empty according to the condition of the veins in the rock, is the deep and gloomy Pheneus; it extends over several thousands of acres, and lies 2461 feet above the sea, at the foot of seven lofty pine-covered pyramidal mountains; a subterranean channel carries its waters to the principal Peloponnesian stream, the limpid Rufia (formerly the Ladon), which receives the renowned Alpheus. Lake Stymphalus descends, it is supposed, through katavothras toward the Gulf of Nauplia; it supplies the chief source of the Erasinus and the fountains of Lerna, which spread out in the marshes drained by Hercules. Another stream — if these can be called streams — flows north toward the Gulf of Corinth under the name of Mavro Nero, Black Water, or Drako Nero, Dragon Water; it rises in the snows, then it falls suddenly 197 feet in two misty scarfs; out of this sometimes sombre and sometimes gracious torrent, the ancients made the muddy Styx of the lower world, whose murky floods were forever stirred by the bark of the fatal ferryman, Charon.

Morea comprises five nomes: —

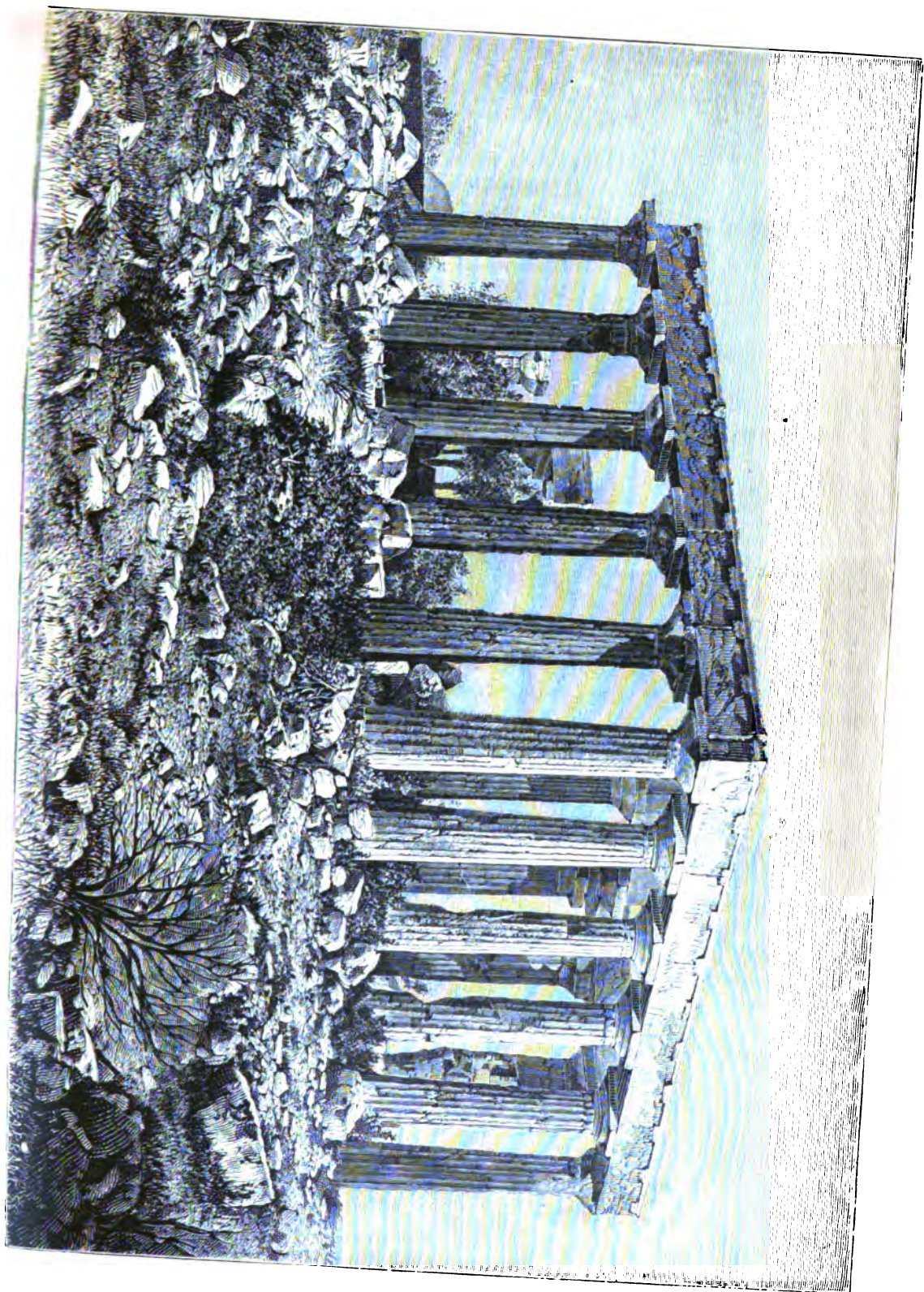
Achaia-Elis lies on the north-west, on the Gulf of Patras and the sea which kisses the sands of Zante; this division possesses Mount Erymanthus, the river Gastuni, once called Peneus, and the commercial port of Patras.

Messenia, in the south-west, has no city larger than a small market-town; it contains souvenirs of heroic Messene; here are heaped-up, jagged rocks, and the Pirnazza, once the Pamisus, whose superb fountains, at Hagios Floros, are an outlet of the katavothras.

Laconia, on the south, embraces the highest mountains of the Peloponnesus. Mount Taygetus overlooks immortal Sparta and the valley of old Eurotas, to-day the Iri; west of the mouth of this weak torrent the Vasilis Potamo, or Royal River, only 6 miles long, bursts up in great floods from kephalarias formed from the subterranean streams of the plateau. The Iri and the Royal River both flow into the beautiful Gulf of Laconia, shaped by two long ragged promontories which resemble lobster-claws: the western claw terminates in Cape Matapan, the eastern in Cape Malia, not far from ancient Cythera.

Argolis-Corinth, on the north-east, connects Hellas with the Peloponnesus, and

THE TEMPLE OF MINERVA (OR OF JUPITER PANHELLENIS) AT AEGINA



looks out on three gulfs: the Gulf of Corinth; the Gulf of Ægina, or the Saronic Gulf, with its islands of Ægina and Salamis; the Gulf of Argos, or Nauplia, which derives its first name from the city of Agamemnon, ruler of heroes, and its second from a modern port.

Arcadia touches the sea nowhere except on the Gulf of Argos; it is the cradle of the Rufia, which carries an average of 1400 cubic feet per second.

The Islands. — The islands, which comprise about 3575 square miles, with 474,000 inhabitants, are Eubœa, the Sporades, the Cyclades, and the Ionian Islands.

Eubœa. — The mountainous island of Eubœa, or Negropont (1620 sq. m.; pop. 103,000), is 109 miles long and from 5 to 25 broad. Among its limestone mountains, which are very bare in the south, but here and there green in the north, Delphi reaches an altitude of 5728 feet; it rises very near the centre of the island. In front of the capital of Eubœa, the ancient Chalcis (mother of so many colonies), the Euripus, which separates the island from the mainland, is only 200 feet broad.

The Sporades. — The Sporades — that is to say, the "scattered" — are islets, rather than islands, north-east of Eubœa. The largest bears the name of Skyros.

The Cyclades. — The Cyclades were thus named because they lay in a circle around Delos, the island of the god of day. They are of limestone or volcanic formation, and are perfectly bare, and almost destitute of water. The Greeks who inhabit them have Italian and Turkish blood in their veins. The nome which these islands form contains 132,000 inhabitants, on about 1050 square miles.

On the north, Andro continues Eubœa beyond the Strait of Doro; it rears a mountain to the height of 3182 feet. Its Greek population is mixed with Albanians. Smiling Tino in its turn continues Andro, which it nearly touches. Syra, or Syros, the most densely peopled of the Cyclades, — owing to its commercial town of Hermopolis, — is, nevertheless, nothing more than a large treeless rock. Dili, its very small neighbor, is the old Delos, the venerated sanctuary of Apollo. Naxia, or Naxos, the largest of the Cyclades, is also the most beautiful and the most fertile; it has mountains whose tops are over 3250 feet above the waves; there is Venetian blood and some little French blood in the best families, and the island still abounds in souvenirs of crusading times. — Paros has fine marbles, Antiparos possesses a much vaunted grotto. — The famous Santorini, a rock destitute of fountains, but covered with vines, overlooks on the west, by eminences 1280 feet high, a semi-circular gulf, which is cut off in part from the sea by the escarpments of Therasia; the latter, a steep rock in very deep water, has three volcanic chimneys: Palæo (Old) Kaimeni was thrown up 196 B. C.; Mikro (Little) Kaimeni emerged about 1570; Neo (New) Kaimeni rose from the ocean at the beginning of the eighteenth century, and recent convulsions (1866–1870) have greatly enlarged it. — Melos, or Milo, is also volcanic; it has an excellent harbor, the Bay of Kastron, an old crater, now open to the Ægean.

The Ionian Islands. — The seven Ionian Islands (915 sq. m.) are very densely peopled, having about one inhabitant to every two and a half acres. And yet their limestone mountains, the shadows of which are projected on the Ionian and Mediterranean seas, stretch their nude flanks to the sun reflected from Epirus, Hellas, and the Peloponnesus, and there is only one stream in the whole archipelago that flows the year round; that is in Corfu. The Ionians were ruled for a long time by the Venetians, and for this reason the Hellenic race here is freer from Slavic, Albanian, and Turkish blood than among most of the continental Greeks, and is mixed with Italian elements; down to 1830 Tuscan was the official idiom of the islands.



WOMEN OF MEGARA.

The most northern of the seven, Corfu, formerly Corcyra, lies very near the coast of Epirus; it contains a peak 2887 feet high, which bears the superb title of Pantakrator.¹ Its capital, Corfu, is the fifth city of Greece. — Paxo, a little to the south-east of Corfu, is the smallest of the seven islands; it is doubtful if it contains 500 inhabitants. — Leucadia, the White, incorrectly called Santa Maura,² would be joined to Acarnania but for a very narrow, shallow channel, which can be forded at low tide: it is like another Eubœa on the opposite coast of Greece, and is separated from the mainland by another Euripus; one of its promontories on the south, facing Cephalonia, was renowned in the Hellenic world as the spot from which many despairing beings, historic or legendary, precipitated themselves into the abyss below. — Kephallinia, or Cephalonia, the “island of three hundred villages,” the largest of the Ionians, supports the highest of the “septinsular” mountains, Elato (5246 feet). It is especially dry, and entirely destitute of running water; not far from Argostoli two remarkable little rivers flow from the sea into caverns or crevices of the island; these streams are used to drive mills; what becomes of them below the sea-level is a question that scientists have discussed, but without coming to any agreement. — Thiaki, not far away, was once Ithaca, the country of Odysseus, or Ulysses, the Greek of the Greeks. In his time, Neritos (2624 feet), “with foliage forever stirred by the winds,” bore forests dear to the droves of the “goodly swine-herd”; but, since the days of the industrious hero, Ithaca has lost her shady woods. — Charming and fertile Zante, “the flower of the Levant,” is often visited by earthquake shocks; like Kephallinia and Ithaca, it is a big vineyard of Corinthian grapes. — Cerigo, which approaches the Cyclades nearer than it does the six sister islands, rises opposite the peninsula of Cape Malia; nothing here, unless it be the blue sky and the blue sea, recalls Cythera, beloved by Venus.

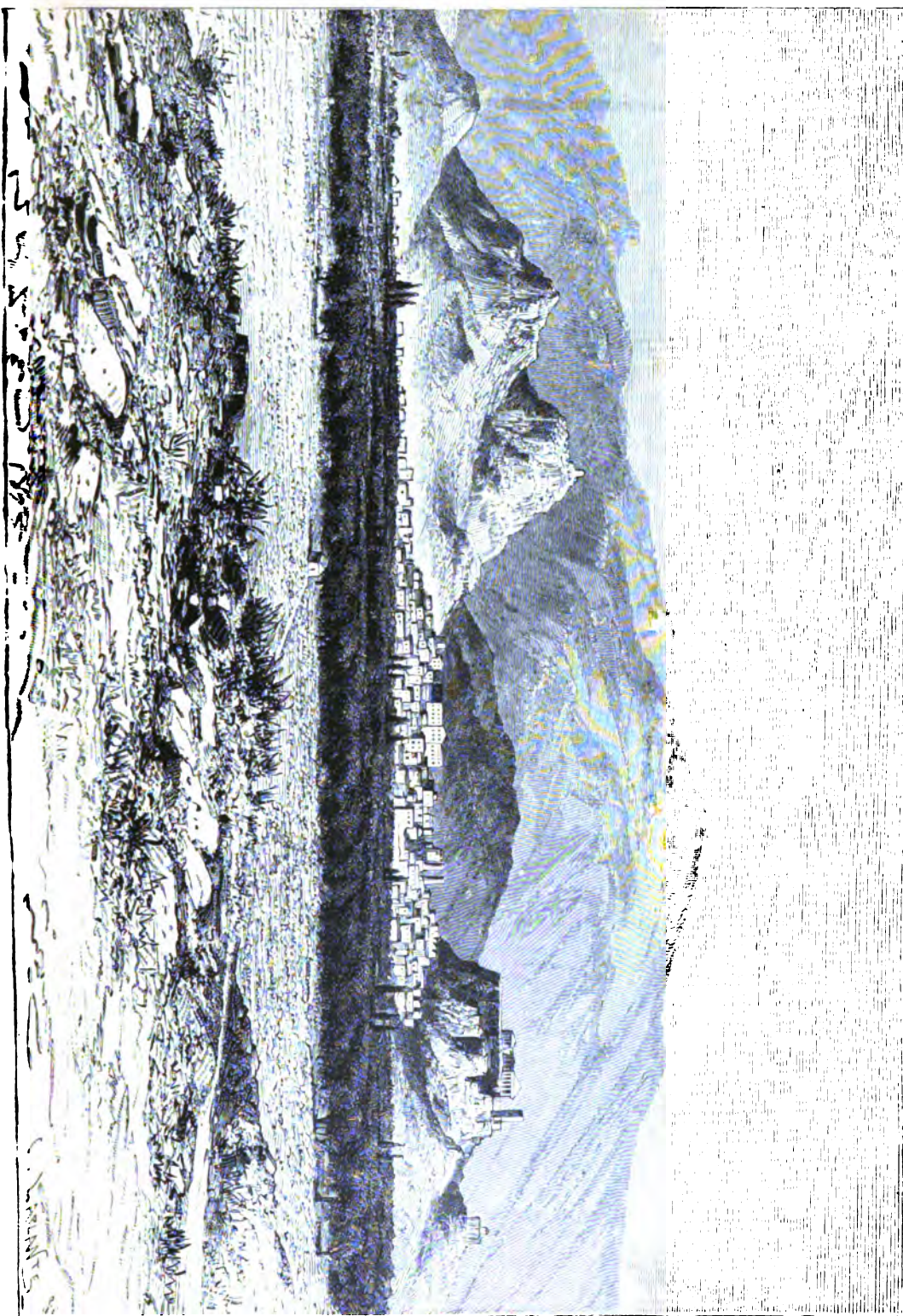
Are the Greeks Greeks, or Slavs? — Maina. — The ancient Greeks were poured out of a crucible in which had been fused elements that are almost wholly unknown to us; the Greeks of to-day doubtless bear little resemblance to the “chosen” race which civilized the old world, and whose poets, architects, and sculptors have never been surpassed.

There were so many massacres in this little corner of the earth, so many peoples passed over it for fifteen hundred years, that the blood of the old Hellenes may have disappeared. According to various ethnologists, the modern Greeks are Serbs mixed with Avars, Bulgarians, Albanians, Roumanians, Italians, Maltese, Jews, Bohemians, Turks, — and probably also with Greeks. Whether descendants or not of the Hellenes, they have retained the Hellenic speech; but words have been contracted, diphthongs have become vowels, auxiliaries have been introduced into the conjugation of the verb, and the pronunciation of the language must have undergone remarkable changes.

The purest Greeks, with the Ætolians and the Sfakiots, are the mountaineers of Maina. Maina overlooks the Eurotas, the valley where Sparta flourished with her stern laws, her gymnasia, and her *esprit de cité*; Maina is, in its turn, dominated by Saint Elias, the principal summit of old Taygetus. There is hardly a more majestic mountain than this Mont Blanc of the Spartans seen from the waves which beat against its promontories, Taygetus is sublime. Its most rugged declivities are on the south, above Cape Matapan, the ancient Tænaron. Maina is a confused mass of marble and porphyry, with forts, watch-towers, and treacherous walls on its points.

¹ Supreme over all.

² From the name of its capital.



ATHENS AND MOUNT ILYMETUS.

All this country is filled with Slavic names, in the neighborhood of Sparta as well as around rival Messene. Where, then, shall we find Hellenes, if they no longer exist in Maina itself?

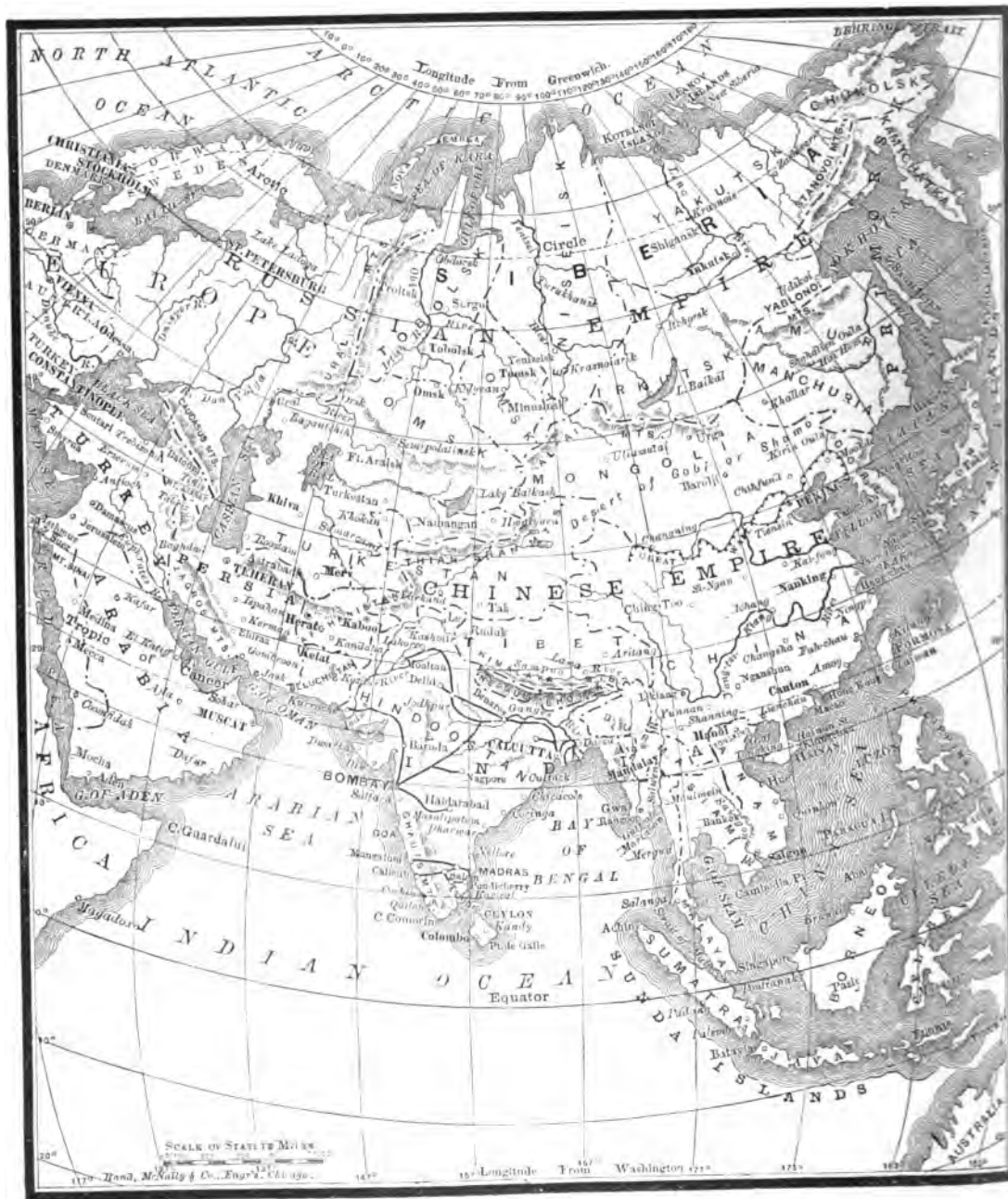
The Greeks are the shrewdest people of the East, and not the least brave; the first third of the century witnessed the death of more than one Leonidas in the narrow passes of Hellas. These heroes who died for the liberty of Greece were, moreover, not all Greeks; there were many Albanians among them, and adventurers from every land, enthusiasts, "philhellenes" of all tongues, and "thirsty, famished" souls, the greatest of whom was Byron. It is no longer as artists, poets, philosophers, and savants that the Greeks lead the rest of mankind; they are chiefly merchants and seamen, if not colonizers as of old. We meet them with Jews and Armenians in the Orient, wherever fortunes are to be made, on Turkish shores, on the Danube, in Odessa, in Constantinople, in Asia Minor, in Egypt, and as far west as Marseilles; they are bankers, money-lenders, brokers, venders of sweetmeats, coffee-house keepers, physicians, interpreters, and officials of high or low rank. Notwithstanding all their energy, notwithstanding their keen wit, their passion for knowledge, and their national pride, which renders them capable of great deeds, the future does not give promise of the realization of all their hopes.

The Albanians form an important element in modern Greece; their number is estimated at 100,000 or 150,000, from a twentieth to a fifteenth of the whole population of the kingdom. They possess large towns in Epirus, on the north of the Gulf of Lepanto, in Bœotia, the south of Eubœa, and in Attica; they are likewise found in the Peloponnesus, and even in certain islands of the Archipelago, as Andro, Hydra, and Spezzia. In spite of their numbers, their rustic vigor, and barbaric strength, the Greek now has no fear that they will form a state in Greece. Though they are more muscular and bolder, though they possess more brute force than the Hellenes, they instinctively recognize the mental superiority of the latter; they are gradually abandoning their virile, rugged language. Moreover, the war for independence, during which the two peoples fought side by side against the Turk, has given them a common history. The Greek has discarded the *chlamys* of his heroic ancestors, and has adopted the Albanian dress, — fez, *fustanellu* or kilt, and boots instead of the old sandals.

Nearly all the Greeks profess the Greek religion.

Cities. — Athens contains 107,000 inhabitants, and 141,000 with its port, Piræus. What sacrilege and what folly to build the modern capital of Greece on the sacred soil of the city of Perikles, close to two streams which are always dry in summer, however great they may be in our imagination under the names of Ilissus and Cephissus! The capital should have been located on the Gulf of Ægina, on the harbor of Piræus, instead of being spread out at the foot of the Parthenon. Nothing attracted the Athens of to-day to the Athens of other times; and as capital of Greece Corinth would have been better.

Then follow: Patras (pop. 34,000), a city of Morea, a port on a gulf of its own name; Hermopolis (pop. 22,000), a commercial port, on the island of Syra; Piræus (pop. 34,000), in reality a suburb of Athens; Corfu (pop. 19,000), on the island of Corfu; Zante (pop. 17,000), on the island of Zante, etc.





MOUNT EVEREST, IN THE HIMALAYAS.

ASIA.

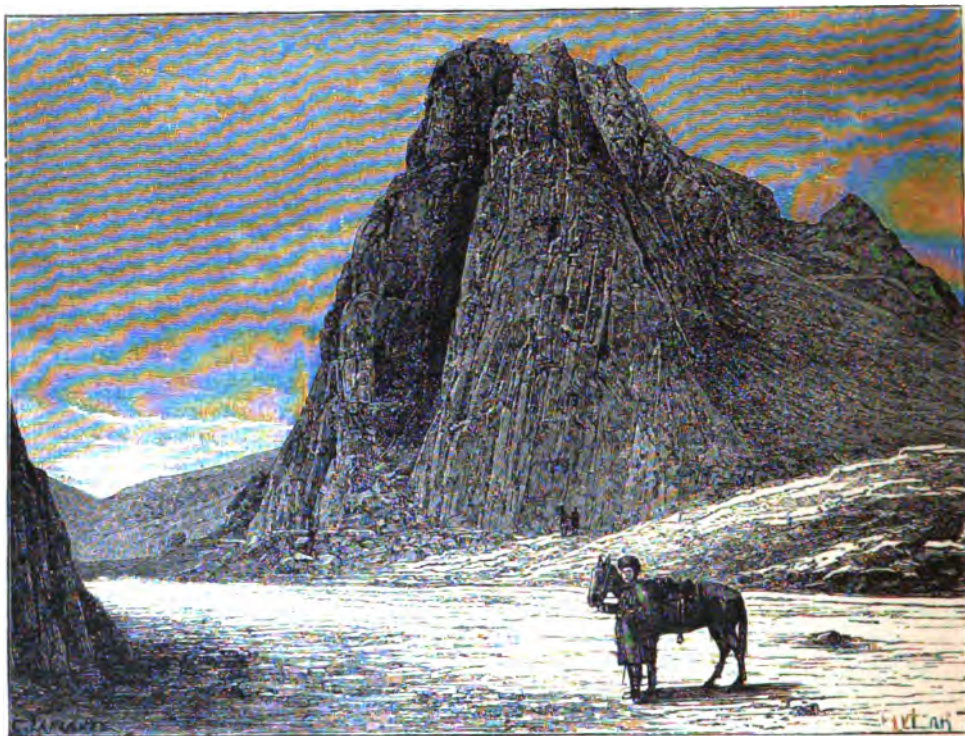
Massive Structure. — Vast Extent. — Asia, the most massive of the five divisions of the globe, the great trunk of the old continent, is joined to Africa by the sandy isthmus of Suez, and separated from it by the narrow sea extending from Suez to Perim. From the Urals to the Caucasus, nothing isolates it from Europe, and the latter is simply one of its peninsulas. In that prehistoric era when Europe and Asia were separated by an ocean, Europe terminated with Scandinavia, the Carpathians, and the Balkans, while, on the other side of this salt water, Asia began with the mountains of its immense Central Plateau.

Asia embraces 16,969,425 square miles,¹ or nearly five times the area of Europe; the two Americas comprise together about 16 million square miles, and Africa about 12 million. Asia, therefore, includes, say, one-third of the dry land of the earth; four-fifths of its surface is in a compact mass, the other one-fifth in peninsulas. Its greatest length, from Suez to Behring Strait, is something over 6500 miles; from north to south the longest distance is about 4350 miles. And not only is Asia superior in extent to the other divisions of the earth, but it contains the most colossal mountains and the peak supposed to be the culminating point of the globe, Gaurisankar, or Mount Everest. With an altitude of 29,002 feet, or nearly twice the height of Mont Blanc, almost three times that of the Pic de Néthou, and four or five

¹ Including the Sunda Isles and the Philippines. See pages 8 and 15.

times the Puy-de-Sancy, Mount Everest towers 6580 feet above the loftiest summit in America (Aconcagua, 22,422 feet). The mean elevation of Asia is about 1650 feet.

Central Plateau. — Giant Mountains. — The Himalayas, which look down from bewildering heights on the burning plains of India, in vain rear the principal mountain of the globe, for the Kuen-lun range, which rises behind them on the north, with a length of 2377 miles, surpasses them in mean elevation; the Kuen-lun chain is the backbone of Asia. On the east, the Himalayas and Kuen-lun are confused with the mountains of Indo-China and China; on the west, they become entangled with the Hindu Kush and Pamir, or the "Roof of the World," a lofty plateau facing, on



ENTRANCE TO THE GREAT STEPPE.

the east, the steppes which extend far away among the Chinese, and on the west the valleys, deserts, and oases which lead to Europe. On the shoulders of these chains, on this "Roof of the World," on the Thian-shan, which prolong Pamir to the north-east, and the Altai, which continue the Thian-shan, rests the great Central Plateau of Asia. The lowest depressions of this lofty plain were once the basin of an inland sea nearly equal in area to the Mediterranean. The Central Plateau, varying greatly in character, in altitude, and latitude, is divided into several secondary plateaus, namely: the Plateau of Tibet, the highest in the world, between the Himalayas and the Karakorum; the Plateau of Khor, likewise very lofty, between the Karakorum and the Kuen-lun; East Turkestan, between the Kuen-lun and the Thian-shan, a lower plain, on the Tarim, a tributary of Lob-nor;

and Mongolia and the sandy desert of Gobi or Shamo, between the Altai and branches of the Karakorum. The climate of these plateaus, though affected by a thousand local circumstances (chiefly by the altitude), is in all cases arid and harsh. They are hemmed in by mountains, and retain for their own use the greater part of their rivers, which are scant owing to the dearth of rain. These streams are formed from the snow and ice, and from occasional storms; they irrigate valleys which but for them would be uninhabitable; that part of their waters which is not exhausted in irrigation flows into lakes and marshes. It is estimated that the basins of the Asiatic rivers which do not reach the ocean embrace an area equal to the whole surface of Europe.

These inland regions, so ill used by a continental climate, offer a few oases and extensive pasture-grounds to Turkish, Mongolian, and Tibetan tribes, some of which are settled, others nomadic. Central Asia has figured in the world's history. Her poverty was the source of her power. Steeled to endurance by incessant warfare against a rebellious soil, in an inclement climate, the nations of Central Asia overran the rest of the globe; not in immense emigrations, for the poverty of the Great Plateau has always rendered that impossible, but by countless *razzias*, made on untamable horses. For tens of centuries, and until toward the last days of the Middle Ages, squads of fierce horsemen swooped down, with the speed of the wind, from these high regions, driving everything before them, so that in one onset after another the people were shaken, and in some cases swept away, from the middle of Asia to the extremity of Europe,—in Turan, Slavia, Hungary, Germany, France, Italy, Spain, and even in North Africa. A few tens of thousands of these Centaurs, or, as we should say to-day, of these Gauchos, could make the earth tremble. With them Jenghiz Khan¹ founded, for a few short years, the grandest of empires; and it was with these same hordes that Tamerlane,² at a later period, covered half of Asia with charnel-houses. Aided by the nomads of the low steppes of Turkestan, and by the horsemen of every race and every tongue who associated themselves with them in their policy of fire and blood, they conquered Russia, India, and China. Now poor, peaceable, and gentle, these shepherds leave the world to its fortune, and Russia disputes their possession with the Chinese.

Plains and Plateaus Bordering the Central Plateau.—India and Indo-China, Iran, Turan or the Great Steppe, Siberia, and China, surround this mighty acropolis of the old world.

¹ Jenghiz Khan (1162-1227) ascended the Mongol throne at the age of thirteen. At that time he was known as Temuchin, a name bestowed upon him by his father, Yesukai, from the name of a Tatar chieftain against whom he was conducting a successful campaign at the time of the boy's birth. On Temuchin's accession to power, several tribes deserted his banner, and for a while it seemed doubtful whether his rule could be established. However, his mother, Yulun, at the critical moment, seized the national standard, and led the faithful retainers against the deserters, a half of whom she brought back to their allegiance. Temuchin was at war with one or another of the neighboring tribes down to 1206, when his power was so firmly established that he felt safe in proclaiming himself ruler of an empire. It was then that he assumed the title of Jenghiz Khan (Chinese, Ching-ze, or "perfect warrior"). After having consolidated his sovereignty by the subjugation of his last open foe on the Mongolian steppes, he began a series of bold and successful expeditions against the surrounding nations. And when at last the mighty conqueror was laid to rest in the valley of Keleen, in 1227, the Mongol Empire stretched from the China Sea to the banks of the Dnieper. — Ed.

² Tamerlane (Timur-i-leng), a Tatar chieftain, said to have been a remote descendant of Jenghiz Khan, about the year 1370 fixed the capital of his newly acquired dominions at Samarkand, and from this central point he made thirty-five victorious campaigns,—conquering all Persia, northern Asia, and Hindustan. Before his death he had placed the crowns of twenty-seven kingdoms on his head. He died in 1404, at the age of 69, while on his march for the invasion of China. — Ed.

There is, perhaps, not a more desolate region in the world than the cold, barren Central Plateau; but there is certainly none more resplendent than the exuberant peninsula of India, which spreads its magic garden at the very foot of the Himalayas. How could it be other than peerless when, under such glowing skies, it receives the most copious rains that fall on the planet,—20, 25, 30, 40, and even 50 and 52 feet per year. Three magnificent rivers, created in the Himalayas, in the Karakorum (and in masses still unknown to us), namely, the Brahmaputra, the Ganges, and the Indus, bring down to it snows that can be seen from the Indian plain suspended from the highest summits of the world, as well as those hidden away in the mountain recesses. South of the great plain, on the triangular plateau called the Deccan, the elevation of the surface tempers the climate, and the sun fructifies the soil rather than scorches it, though so near the equator.

This wonderful peninsula has been peopled from earliest times; the oldest histories tell of its kingdoms, its nations, and tyrants, and its wealth. Already India could have filled a vast Pantheon with the statues of its heroes, legislators, and poets when as yet nothing but pebbles and grass covered the seven hills that later became the site of the Eternal City. To-day the genius of India has folded her wings, and the splendid country where dwells a fifth of the human race is obedient to a nation encamped on two European islands.

The slender peninsula of Indo-China has closer contact with the sea. Its streams are as large as the Ganges or the Brahmaputra, and longer, for they rise no one knows where; they likewise connect an opulent land with the dismal Great Plateau. As its compound name so well indicates, Indo-China is the transition from India to China,—in language, in race, and history, as well as in climate and vegetation.

Iran, or Eran, is a high table-land not without resemblance to the Great Plateau; it has the same brazen soil, on a lower socle, and under a less severe but exceedingly dry climate. On the north, the Elburz Mountains arrest the clouds from the Caspian, and they burst in showers over Ghilan and Mazanderan, a coast so wet that it is not only rich in vegetation but malarial. On the north-west rise the mountains of Armenia, which are for the most part bare and monotonous, and even desolate, but they overflow with springs, and torrents, and rivers that unfold in limpid curves; several peaks of these mountains tower into the regions of perpetual snow, but they none the less rob Iran of more moisture than they bring to it. On the west, high mountains cut off the plateau from the moist winds which might perchance reach it from the distant Mediterranean above the Syrian sand and the Mesopotamian alluvium. On the south-west and south, the lofty table-land stretches as far as the sierras from which one sees, at fathomless depths below him, the waves of the Persian Gulf and of the Indian Ocean; here very little rain rises, and that little is seized by the mountains in its path. Iran is, therefore, seldom visited by showers; the climate is cold on the mountains, and harsh and windy on the plains. The entire region is treeless, and consists of sandy or saline plateaus, with hills and mountain chains dispersed over the steppes. Iran was once inhabited by a "White," "Caucasian," or "Aryan" race (all of which names are equally misleading), but this old people has been deeply penetrated by Arabic and Turkish elements. Ancient Iran has retired behind her curtains of mountains, and the country is forgotten to-day.

From the peaks rising on the western frontier, Iran looks out on two other famous historic countries, Arabia and Babylonia; these both join Asia Minor.

Arabia, a straight-flanked peninsula, with no genuine gulfs, no estuaries, no islands, is likewise bordered with mountains, which bar out the almost flaming winds of three seas, namely, the Indian Ocean, on the south; the fiery Red Sea, on the west; and on the east the no less torrid Persian Gulf, which communicates with the Indian Ocean through the Gulf of Oman. Between these mountains are other arid mountains, a few valleys with a little water, and immense fields of sand. This dry, burning clime has developed a dry and hardy people, which once overran the world, and which was, for a moment, almost master of the earth.

Asia Minor, like Iran, is a small central plateau, largely encircled by seas, and destitute of rains, because the moisture which rises from the water comes in contact with littoral chains: hence the cold, dry climate of the interior plains, which are occupied by Turks and Armenians, and the mild, warm temperature of the somewhat humid coasts of the Black Sea and the Mediterranean, whence the Greek element seems to be marching to the conquest of the valleys, and perhaps of the plateau. The Arabs predominate in the hot southern regions, and also in Mount Lebanon, and in the elliptical plain of the Tigris and Euphrates, that old country of great empires. It is in the land of these Arabs that we find the lowest depression on the globe, the Dead Sea, 1292 feet below ocean-level: the highest and the lowest points on the earth's surface are therefore in Asia.

Turan, or the Great Steppe, stretches from the rim of Iran to the valleys of the Irtysh basin, and from the Caspian Sea to the Roof of the World; this land would have no settled inhabitants were it not for its two streams, the Amu and the Sir, (formerly the *Oxus* and the *Jaxartes*), for life-giving clouds are rare here; the little rain that falls starts the grass on the Steppe for a few days, or perhaps does not evoke a single spear from the death-stricken deserts. If, as has been claimed, — some say demonstrated, — the "Aryans" lived in the Great Steppe, they inhabited only the river oases; or else Turan once possessed a moister climate than it has at present. But whether Turan was or was not the home of our ancestors, the little of freshness that remains to it is fast disappearing. The earth is drying up there, as everywhere around the Caspian and in all of central Asia. But along the Amu, the Sir, and a few other rivers fed by the ice and persistent snows, the soil can be turned to good account; no more fertile spots are to be found anywhere than these lowland oases illumined by a brilliant sun, and lying under the same parallels of latitude as Naples, Bordeaux, and New York. The Russians will probably turn the water-courses into the parched plain. In order to weld Turan solidly to Russia, it will be necessary to fix the Turkoman or Kirghiz nomad to the soil, seize him with the government machinery, and then Slavize him, as well as the settled Turk or Persian, by uniting his destinies to those of a skilfully disposed net-work of colonies; now, colonies are impossible without land, and in Turan there can be no land without water.

We pass from Turan (now Russian territory) into Siberia through an intermediate district, called the Steppe of the Irtysh; this region is less crabbed than the Great Steppe; it is watered by rivers, and is gradually yielding to the settler's plough. Siberia is a country of magnificent distances. Its great streams receive affluents as long as the Danube. Three of these, the Ob, the Yenisei, and the Lena, move silently toward the Arctic Ocean through woods and swamps; the woods, however, disappear long before the rivers reach the sea. A fourth, the Amur, is almost as long as these three united; it is divided between Russia and China, and, descending

toward the east, empties into the Sea of Okhotsk. In Siberia, which is far more vast than all Europe, we find all the severe climates of the frigid and cold temperate zones; in many regions, where the climate favors the growth of a virile race, Slavia has planted the people to whom the future of the continent belongs, for the physical character of Siberia is such as to assure to it the hegemony over immense regions.

From Siberia, we reach China across the Central Plateau, or by the valley of the Amur. China is backed against the Great Central Plateau, and develops 800 leagues of coast-line on the Pacific Ocean. In the centre the climate is mild and moist, in the north cool or cold, and not torrid in the south; China, then, unites all the temperate climates. It contains all kinds of rock and all kinds of soil, but is especially noted for its Yellow Earth (*loess*), which is as valuable as the Black Earth of the Russians, and which is perhaps nothing more than the dust from the central steppes of Asia, brought down from day to day, and from century to century, on the wings of the winds. This generous soil and moderate climate were destined to create a mighty people. Millions of men lived here in civilized cities when Europe was still a fen-forest in which savage cave-dwellers massacred each other in ceaseless warfare; these millions of men constituted a society governed by strict laws; they formed a lettered world which was less ambitious, less aggressive, and less domineering than the Romans, and less smooth-tongued than the Greeks, but which was much more industrious than either of these two great peoples of history. From 345 to 350 million Chinese, almost a fourth of the human race, to-day throng the Celestial Empire; they submit, without a murmur against their mandarins, to a minimum of laws and regulations; they speak dialects of the same language, profess a kind of social ethics rather than a religion, and are all apt at trade, agriculture, manufacturing, and the imitative arts.

Separated from the Russo-Chinese coast by an almost inland sea is the superb archipelago of Japan; it is mountainous, well watered, and rich in its insular climate, which is warm enough to ripen the orange in the south. It is provided with excellent harbors, and inhabited by an imitative race, but one which is endowed at the same time with creative genius. Japan has not the future before it which the Japanese believed was theirs in the first years of their awakening, when, suddenly renouncing their fidelity to Chinese civilization, they became the bigoted copyists of Europe, and when, in the intoxication of their new life, they devoted themselves to casting cannon and armoring their fleets. Face to face with powerful enemies, with the Russian, who never retreats, and the Chinese, who is wholly impenetrable, they cannot extend their empire on the continent of Asia. The neighboring peninsula of Korea has already escaped them, and recognizes Chinese allegiance to avoid the Russian suzerainty.

Climate. — The life of Asia is along the seaboard and in the islands, except on the Siberian bays, capes, and deltas, which are almost eternally ice-bound. It is also on the shores, those of Russian Asia excluded, that the warm, creative breezes blow; and it is there that all the rain falls which is brought from the Pacific and from the Indian Ocean by the monsoons. As only a seventh of the surface of Asia is in the torrid zone and a seventeenth in the frigid, the continent lies largely under temperate skies; the climate would be for the most part temperate but for the elevation of the great Central Plateau.

Races. — Languages. — Religions. — Asia has a far better claim than Italy to be called the “great mother of all things, the land of Saturn.” The Whites, or at least those so named, perhaps originated in Asia; the Yellows first saw the light there, and they have overspread it in dense masses; it was from Asia that the Arabs, the Tatars, and the Turks set out to conquer the world; and, lastly, there are Negroes and Negroids in this great division of the world. It is estimated that the Yellows, or Mongolians, constitute three-fifths of the Asiatics, who are rated at 826 million souls. The Whites, pure or mixed, form nearly two-fifths.

All the great religions originated in Asia; there are at present scarcely two million Jews and fifteen million Christians in Asia, and these are chiefly in the Russian Empire, in Asia Minor, and in the Catholic or Protestant missions, notably in China and Tonquin. The Mussulmans extend from Constantinople to the mountains of China, either in compact bodies or in scattered communities; in India alone they number 50 million; they are much more numerous than the Christians, but much fewer in number than the Buddhists and Brahmanists of the extreme Orient. A fifth, at most, of the Asiatics, including Mohammedans, as well as Christians and Jews, are monotheistic in belief.

The Asiatic peoples remind one of the billows of the sea, some swelling and advancing, others falling and receding. The Russian wave is moving unerringly southward. The Chinese are advancing northward, in Manchuria, which borders the Russians, and they are sweeping steadily westward to the conquest of the high Plateau, whose rebellious soil they hope, with good reason, to bring under cultivation; southward, in Indo-China, they have important colonies. In India, more than 280 million men, of divers races and idioms, are subject to the English, who hold them at present with a tight rein. When compared with Siberia, China, and India, the rest of the continent — Asia Minor, Persia, and Arabia — is inconsequential; it is the Asia of the past, and not of the future.

RUSSIAN ASIA.

Russian Asia, which is annually enlarging, comprises, including Siberia and Turkestan, with the Transcaspian Territories and Transcaucasia, about 6,346,900 square miles, with nearly 17½ million inhabitants. Its area is twice that of the United States, and almost double that of Brazil. But, however valuable this region may be, there are too many Arctic plains, too many steppes, and too many sandy tracts, for it to be worth in any future twice as much as either the United States or Brazil. No country in the world has been more persistently calumniated. So many exiles have consumed their lives there, around Berezov or Irkutsk, during the long days and the long nights of the high north, in the despair of their lost youth and of their blighted, wrecked lives! Siberia is, in truth, another Russia, though much more vast, and somewhat colder; it possesses a very extensive and very valuable Black-Earth Zone. Comprising as it does all the north of Asia, its great bulk will some day make it a formidable power on the continent.

SIBERIA.

Yermak Timofeief. — **Siberia.** — Toward the end of the sixteenth century, Russia, which was then hardly freed from the Tatar yoke, had her Francisco Pizarro or Hernando Cortes, as Spain had had hers fifty years before, when but just delivered from the hands of the Moors. A Cossack of the Don, the brigand chief Yermak Timofeief, driven from the Volga by Ivan the Terrible, fled to the Urals with 840 adventurers, and then, marching east, captured the Tatar and Mussulman town of Isker. Afterward, wishing to curry favor with the Czar, he offered him his conquest "for as long a time as it should please God to let this lower world live." The country invaded by Yermak Timofeief was found to resemble Russia in its boundless steppes and sluggish rivers. Men roamed over it at will, and, less than a hundred years later, the Cossacks, while in search of gold, or while hunting furs, came in contact with the then almost mythical Chinese, on the banks of the Amur.

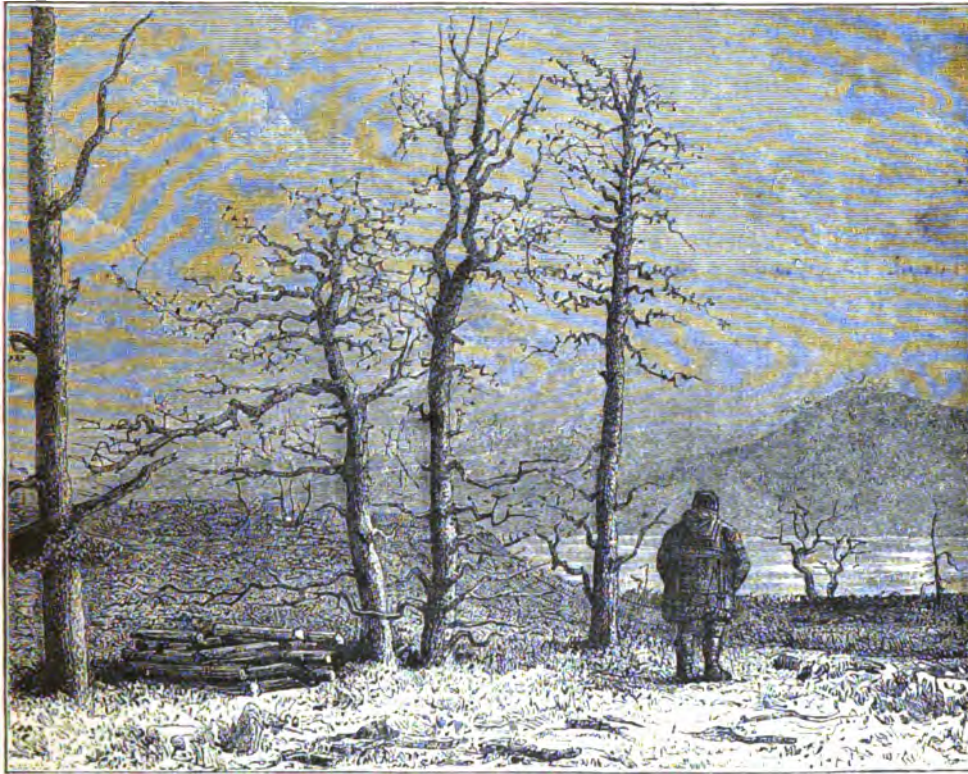
This immense territory, which has since been vastly augmented, is called Siberia; the name comes either from *Sibir* or *Sever*. *Sibir* was the Russian designation of the Tatar town conquered by Yermak, and which was probably on the Irtysh, 11 miles above the site of Tobolsk; *Sever* is the Russian word for north; Siberia, indeed, merits the title of Land of the North, not so much because it extends beyond the Arctic Circle, as on account of the incredibly cold temperature of the districts north of Irkutsk and the mountains of the Lena.

Siberia comprises about 4,828,000 square miles, a fourth more than the area of Europe, with 4 million inhabitants, or perhaps $4\frac{1}{2}$ million, — not including the governments of Perm, Ufa, and Orenburg, which are attached to Russia in Europe, although a large part of their surface is on the Asiatic slope. Siberia extends from the Urals to the Pacific, and from the southern plateaus and the lofty mountains which form the bastions of central Asia to the shores of the Arctic Ocean.

Climate. — Almost the entire surface of Siberia is in plains, steppes, and marshes or *tundras*. From the highlands to the tundras stretches a magnificent alluvial tract, but, owing to the scant rainfall, it lacks the fertility that might be expected from it. Siberia is almost wholly shut off from the Pacific by lofty mountains; the masses of central Asia separate it from the Indian Ocean, and Europe severs it from the Atlantic; with no sea exposure except on the Arctic, which is frozen the greater part of the year, the rainfall¹ is very light, and even that is diminishing. Siberia is drying up, and rivers which once reached the Irtysh, the Ob, and the Yenisei are now arrested somewhere in the Steppe; lakes have lost their outlets, and are gradually becoming brackish ponds, or pools of diluted mud, or are entirely disappearing. The forests, too, though very vast, are wanting in wild force, in luxuriance and boldness. And if the forest lacks vigor and majesty, what can be said of the trees which prolong it on the north in the direction of the tundra? The hardened soil prevents their roots from penetrating it deeply, the north wind blasts their buds, and their trunks bend and crawl under the weight of the eight months' snows; these sickly, puny trees are followed by dwarfed shrubs, and beyond these there are only mosses and the pale grass of the tundra, lit up by the oblique rays of a pale sun, or abandoned to long and

¹ Generally, from 10 to 20 inches, according to locality: 13 at Tobolsk, and 35 on the shores of the Sea of Okhotsk.

often gloomy nights. In the extreme north, and especially toward the east, desolation and death reign, — along the lower Ob and Yenisei, on the Khatanga, the Anabara, and the Olenek; still more despotically on the lower Lena, and along the Yana, the Indigirka, the Kolyma, and the Anadyr, coastal streams which, though small in Siberia, would rank among the great rivers of France or Italy. In many a town the temperature sinks to more than 75° F. below zero; the annual mean of Yakutsk is $+11.8^{\circ}$ F.; of Ust Yansk, $+3.9^{\circ}$; of Verkho Yansk, $+1.9^{\circ}$; the Russians and savages who endure the climate of this last settlement see a variation of 180° during



SIBERIAN LARCHES.

the year, or from more than -76° to nearly $+104^{\circ}$. The more clement south has its "Italies," though these are chill in winter.

The Irtysh-Ob. — The Urals. — The Altai Mountains. — The longest branch of the Ob is the *Ertchis* of the Mongols, and the Irtysh of the Russians; it is a brownish stream, impregnated with clay.

The Irtysh, which rises in Chinese territory, on one of the Altai slopes, is only an insignificant river when it receives from bottom springs the invisible tribute of Lake Uliangur, apparently a basin with no outlet; these floods triple the volume of the stream, and we may therefore consider this effluent of the lake as the true source of the Black Irtysh, — the name applied to the river as far as Lake Zaisan, or "Noble Lake," a Russian sheet of water 1345 feet above sea-level. And why Noble Lake?

Doubtless from some tradition, for there is nothing imposing about this *nor*. It is simply a shallow, yellow pond, surrounded by low banks, which it overflows in the rainy seasons; on the average, it covers about 700 square miles.

Issuing from Lake Zaisan, under the name of White Irtysh, the stream receives from the Altai Mountains the transparent waters of perennial rivers, so that it is already a powerful current when it enters the magnificent gorges which extend from the mouth of the Bukhtarma to Ust Kamenogorsk; these defiles are cut through granite and schist and are wonderfully grand, but they possess no historic interest, and lack grace, verdure, and life, except for a few mediocre willows and poplars. The course of the Irtysh is henceforth through the Steppe; it is encumbered with islands, and flows between clayey banks, which the floods erode; it often changes its channel, and is forever excavating, filling up, and obliterating. The same changes are likewise taking place in its affluents; many of them are diminishing with the increasing aridity of the climate, and have ceased to bring down their tribute at all seasons.

From Semipalatinsk to Omsk, on its right bank, the Irtysh skirts the steppe of Baraba, one of the most extensive and fertile agricultural districts of all Slavia; it is another Tchernoziom, free from stones, but covered with fine trees, which the Russian settlers are felling. This is a favorite spot for Slavic emigration. Below Omsk, beyond the cliffs of Tobolsk, at Samarovsk, the Irtysh encounters the Ob; the Irtysh is longer, and doubtless stronger, than its rival, for it has already traversed a distance of about 2800 miles.

The Ob¹ is formed in the Altai Mountains, and receives, at first through the Irtysh, and then directly, the waters of the eastern slope of the Urals. The Urals have little variety and no grandeur, notwithstanding their length. The Altai system, on the contrary, is a magnificent assemblage of mountains. This group is hardly half as high as the Thian-shan, the chains of which it prolongs in a north-easterly direction; the Altai are in turn continued beyond the Yenisei, and in the same direction, by the Sajansk Mountains. The loftiest Altai peak, Bielukha (White Mountain), has an altitude of 10,991 feet. It rises above a small glacier, the source of the Katunya, the most powerful of the torrents which unite to form the Ob. This stream originates in the only glacier in the entire basin of the Ob. The Altai chain is of very ancient rock; it is composed of granite, porphyry, serpentine, and schist, and sometimes spreads out in loamy plains. It is rich in mines, like the Urals, and like them, also, the native land or the abode of aboriginal races; it conceals in its folds the best sheltered and the mildest of the "Siberian Italies," and settlers emigrate there in multitudes, as they do to the steppe of Baraba.

The Ob, formed by the glacier-fed Katunya and the Biya, the outlet of a deep lake in the Altai rock, does not remain long in the mountain. At Barnaul its altitude hardly surpasses 390 feet, and yet it is fully 1850 miles from this town to the mouth of the Irtysh-Ob. The Ob flows, like the Irtysh, in manifold arms, from one group of islands to another; its breadth varies from 9800 feet in the dry season to 130,000 in the spring, when it carries in its floods enough uprooted trees to plant a vast forest. Its waters are not as dark as those of the river of Tobolsk, and the two currents flow for a long time without blending their colors. Then the Ob continues its way through forests; but as the streams meet north of the latitude of Saint Petersburg, we are approaching the Arctic Circle. Gradually, the aciculars, and birches, and willows become dwarfed, and then disappear. At last this longest of Siberian

¹ This name is more often, though incorrectly, written Obi; the latter form is the genitive of Ob.

rivers (and certainly one of the greatest in the world) enters an estuary 500 miles in length, and having a breadth of 164,000 feet from bank to bank; this estuary opens nearly opposite Nova Zembla. The entire length of the Irtysh-Ob, including the estuary, is 4000 miles; its basin embraces 1,360,000 square miles, and contains 5 million inhabitants.

The Angara-Yenisei. — Lake Baikal. — The Angara-Yenisei carries more water than the Irtysh-Ob, at least in summer (owing to the Baikal reservoir, which is now fifty-six times the size of Lake Lemman), but it is not quite as long (3230 miles), and its basin is somewhat smaller (1,085,000 sq. m.).

As the Irtysh abandons its name for that of the Ob, its inferior, so the Upper Tunguska, which has a greater volume than the Yenisei and a course longer by 750 miles, becomes the Yenisei. The Yenisei receives more mountain torrents than the Ob, and gathers more waters from persistent snows. It is formed on Chinese soil, and enters Russia to wind about, closely pressed upon by the Altai Mountains, in gorges where, though a powerful stream, its width contracts to 105 feet. It reaches the great plain near Krasnojarsk. The yellow flood which it mingles above Yeniseisk with the Upper Tunguska is often a mile or a mile and a quarter broad in summer, and three or four times that in the spring freshets. Doubled, or perhaps tripled, by the waters of the Upper Tunguska, and again increased by such streams as the Lower Tunguska, the Yenisei at length enters the Arctic Ocean through a mouth 14 miles wide, the contraction of an estuary having a breadth in places of fully 40 miles.

Under the name of Selenga, the true Yenisei flows from a glacier, on the Munku Sardyk. This peak (11,450 feet) is the highest, not of the Altai proper, but of the Sajansk Mountains; Munku Sardyk doubtless owes its name, which signifies "Silver Mountain," to its glacier. These waters are purified 5397 feet above the seas, in the Kosso-gol, a lake occupying 1275 square miles, and yet only a tenth the size of Lake Baikal, into which the outlet of Kosso-gol flows. Munku Sardyk, Kosso-gol, and the greater part of the 680 miles of the Selenga's course belong to China, or, more accurately speaking, to Mongolia; the lower Selenga and Lake Baikal are in Siberia. The Orkhon, one of the affluents of the Selenga, enters the heart of the Mongolian plateau not far from the site of Karakorum, the ancient capital of Jenghiz Khan. No trace remains of Karakorum, or the "Black Camp," except a battlemented wall and a few heaps of rubbish. This chief encampment of an immense horde of Mongolian and Tatar cavalry — for the army of Jenghiz Khan was little else — was, doubtless, a clay town, surrounded by movable tents, — one of those overgrown, ill constructed villages whose very ruins perish.

Baikal is situated in a plateau fault, at an altitude of 1560 feet; it has depressions much below sea-level, and the lead has been known to reach a depth of 4505 feet. It receives the waters of 125,000 square miles. These waters contain few impurities, owing to the granitic nature of their basin, and what there are sink to the bottom of the abyss, which they will not soon fill up; for Lake Baikal covers an area of 12,400¹ square miles; it lies among stern mountains, surrounded by porphyritic rocks, and shaded by austere larches, pines, and firs.

This Holy Sea — as it is called by the Russians (*Sviatoïe More*), as well as by the Mongols (*Dalai-nor*) — is covered in winter, from shore to shore, with ice that would bear the weight of armies with their horses and cannon. The water which flows out of Lake Baikal is marvellously spotless; it is as blue as the Rhone at Geneva,

¹ Exactly 12,430.

and ten times more powerful. Under the name of Angara, the beautiful, impetuous stream descends nine rapids, bathes Irkutsk, and then becomes the Upper Tunguska — Tunguska, because it waters the country of the Tunguses.

The Lena. — The Lena also gives its name to a river that is broader and longer than itself; when it comes in contact with the Vitim, which has a length of 1339 miles, the Lena is 432 miles shorter. It rises at an elevation of 1939 feet among mountains 4000 feet in altitude, which plunge down within a few miles of the west shore of Lake Baikal. It moves majestically toward the north-east, and then to the north-west. Cold and clear, and but little ruffled by the winds, the solitary stream flows through a deep valley, between meadows lying at the base of hills with craggy slopes and forest-clad plateaus. At long intervals it passes before the wooden houses of a Russian village, in the bosom of a land that once belonged to two free nations, namely, to the Yakutes, a Turkish-speaking people, in the north, and to the Tunguses, who made use of an idiom closely resembling Manchu, in the south. Beyond Yakutsk, it receives enormous rivers (the Aldan and the Viliui) without apparently increasing in volume; it is like a moving lake; sometimes it measures 5, 10, or 12 miles from bank to bank. It empties into the Arctic Ocean through the branches of a delta of 8500 square miles, opposite New Siberia, a large inhabited archipelago. The Lena is 3100 miles long, measured to the source of the Vitim; it drains a basin of nearly a million square miles, which is occupied by scarcely 300,000 men; most of these are Yakutes, though they include a few Russians.

The Amur. — The Littoral Province. — A fourth immense stream is the Amur, which passes through lands inhabited by several different peoples. The river bears various names; the Manchus call it Saghalin Ula, or Black Water; the Yakutes, Kara Turan, or Brown River; the Goldi, Mango; and the Chinese, He-long kiang, or stream of the Black Dragon; and its floods are in fact brown.

The Amur is formed by the Argun and the Shilka: the former receives its waters from long but scant rivers rising on Chinese soil; the latter, which is much swifter and purer, and in a more humid climate, comes from the union of the Onon and the Ingoda, both of which descend from the Yablonoi Mountains (Mountains of the Apple-trees), south-east of Lake Baikal. The culminating point of these sunny and slightly wooded mountains is Mount Sokhondo (8200 feet). The Shilka crosses the metalliferous and auriferous mountains of Nertschinsk, then joins the Argun, where it takes the name of Amur, and from this point as far as the mouth of the Ussuri it separates Siberia from China.

From earliest time the banks of the Amur have been uninhabited, and they are peopling now with extreme slowness; a few Cossack *stanitzas* and a few villages of Russian peasants are to be encountered, and that is all. The Amur receives two large currents, the tawny Zeya, near Blagovestchensk, and the Bureia; then it flows for over a hundred miles through splendid gorges, cut in granite rocks, through wild forests, and then receives the Sungari, an enormous river of Chinese Manchuria. The Sungari may not be larger than the Amur; at their confluence, however, the rapid and clear, although dark-colored, Russian stream scarcely occupies a third of the bed, and gives to the less pure and whitish¹ Manchu stream the appearance of pre-eminence; in any case, the Amur is the longer of the two. Below the Sungari the Amur is one of the great currents of the world; but it is encumbered with sand-banks and obstructed by islands; after it encounters the Sungari it flows steadily northward, and

¹ The name Sungari means, in Manchu, "Flower of milk."

consequently becomes continually colder; after receiving, near Khabarovka, the rich tribute of the Ussuri, and having once again cut its way through mountains, below Nikolajevsk it empties into a sea which is frozen six months out of twelve, or rather



GOLDI.

into a strait, the Gulf of Tartary, which separates the island of Saghalin from the mainland. But for this fatal curve the Amur would enter the sea near Vladivostok, where the waters are almost always free. From the source of the Kerulen, the longest branch of the stream, to the Gulf of Tartary, the Amur has a length of 2800 miles, in a basin of 807,000 square miles.

Opposite the Japanese islands of Nippon [Hondo] and Yesso, and the Russian island of Saghalin, lies the Littoral Province; Russia possesses some marvellous harbors here, veritable Rio de Janeiro's, and Vladivostok might merit the arrogant title which its founders bestowed upon it; but "Supreme-in-the-Orient" lies under chill, sullen, foggy skies; back of it stretches an almost vacant territory, with scarcely a few thousand men scattered on the coast and along the Ussuri, a powerful river issuing from the shallow Lake Khanka (1650 sq. m.); here are Cossacks who have come from the *stanitzas* east of Baikal, *synks* or condemned soldiers, convicts who have worked out their time in the mines, Russian peasants, Finlanders, etc. The deliverance of this country is slow and painful, and Vladivostok is far from Holy Moscow: many a peasant has passed three years on the road from his native village in Great or Little Russia to his new home on the Amur or in the Littoral.

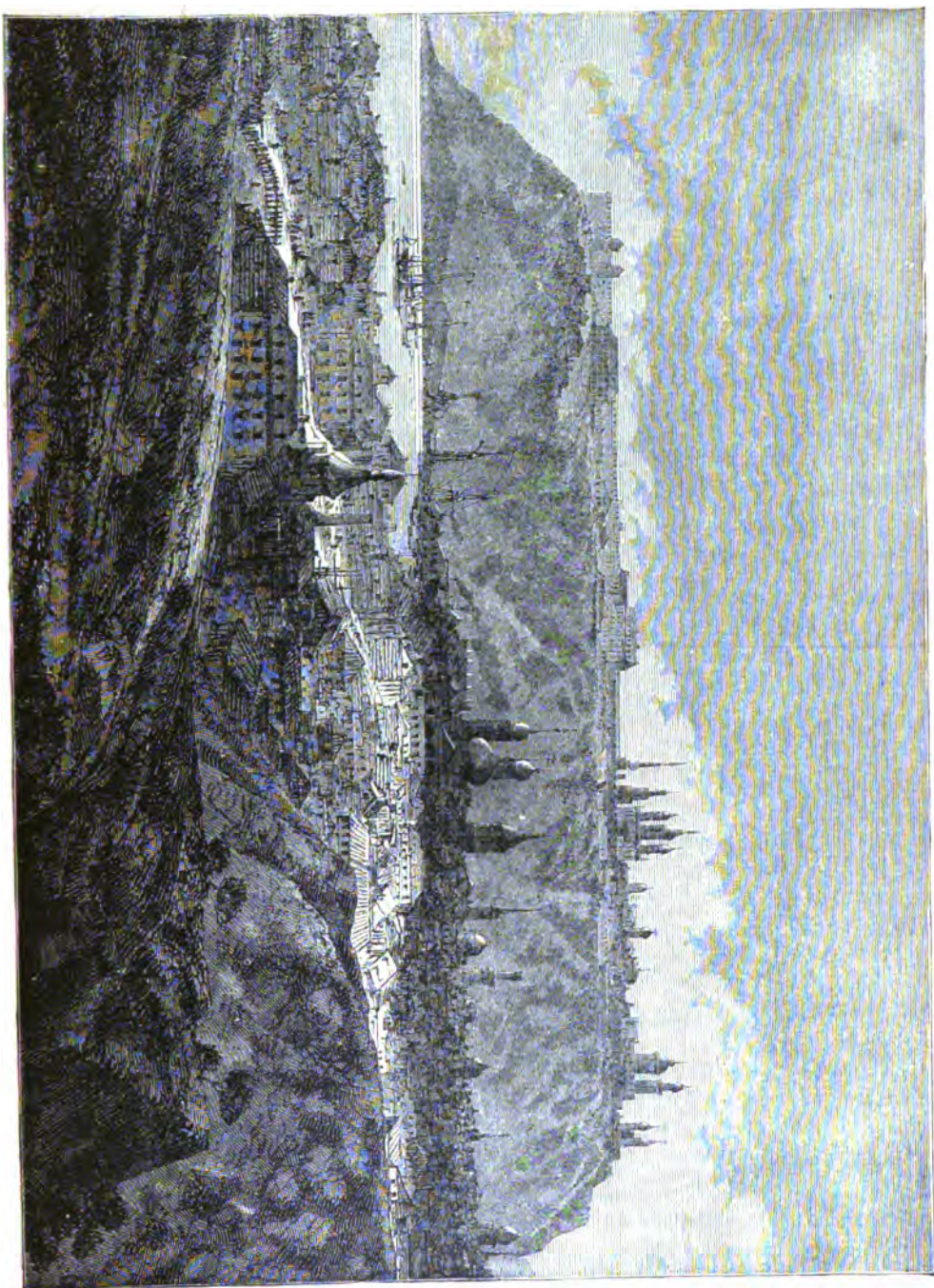
Saghalin. — The true name of the island before which the Amur enters the Pacific is *Karaftu*, for it was thus designated by the Ainos, its old inhabitants, and by the Japanese, its former masters; but it is now called Saghalin. It is hardly an island in summer, and in winter the ice welds it to the continent across the narrow Gulf of Tartary. Saghalin measures 600 miles from north-west to south-east, but it is so narrow that its area does not exceed 24,560 square miles. From its shores, which are destitute of good harbors, one can see, when the fogs and drizzling rains permit, a chain of mountains from 2000 to 5000 feet high, with a few forests. These woods, with here and there cultivable valley extremities and a few coal-mines, are the only attractions which the island offers to the greedy Muscovite. More than 250 days of every year are cloudy, and the temperature sometimes sinks to -34.6° F.

Russia sends convicts here to work the coal-mines, and soldiers and officers to guard the prisoners; the rest of the islanders comprise various savage tribes, called Gilyaks, Oroks, and Ainos, and also a few Japanese. The shaggy Ainos are probably the aborigines of Saghalin, and doubtless also of Japan; the Japanese ruled here before the Russians. When the White Czar declared himself master of the lower Amur, he also admitted that Russia possessed the island in copartnership with Japan; but the Japanese yielded their rights in 1875 to the emperor of all the Russias and Siberias, and in exchange received the Kurile Islands.

Saghalin contains, in all, 15,000 men; they are outnumbered by the bears that rove through the fir forests of *Karaftu*.

Kamchatka. — Kamchatka, north-north-east of Saghalin, resembles the seaboard of Vladivostok; it has superb harbors, on such vast bays as that of Avatcha; but in this northern climate everything is valueless.

Among the lordly volcanoes that flame or smoke in this lance-like peninsula, Klyutchevskaya has an altitude of 15,761 feet (nearly that of Mont Blanc), with a base circumference of about 200 miles. It is a treacherous neighbor, but the inhabitants of Kamchatka are few, for, although it extends through ten degrees of latitude, it supports a population of only a few thousand Russians or men who are becoming Russianized. Out of 40 volcanoes, twelve are at times still active; they are attached to two chains of islands which likewise emit flames, namely, the Kuriles, which, with about a dozen active or dormant craters, stretch down to join the Japanese volcanoes, and the Aleutians, whose islands, rearing more than thirty fiery mountains, are like the piles of a supernatural bridge which would connect Asia and America, or the Russian peninsula of Kamchatka with the Alaskan peninsula, which to-day belongs to the United States, as do also the Aleutians.



A VIEW OF TOBOLSK.

The Future. — Different Races. — Mining in the Ural and Altai Mountains, fur hunting and fishing, have long occupied the Neo-Russians of Siberia much more than the cultivation of the soil; now, however, desert and forest are beginning to give way in those regions which are frozen during the winter, but which rouse to fruitfulness in the short, hot, almost nightless summer.

From remote antiquity, Siberia has been inhabited by Finnic, Turkish, and Mongolian tribes, but they are now daily disappearing before the advance of the Europeans. Of these tribes, some rove, hunt, and fish in the north, where the poverty of the soil forbids settled life; others are fixed to the glebe, in the less sterile south. Several of them have adopted the Greek religion; the Turkish tribes profess Islamism; the Mongolians have accepted pure Buddhism, or that degraded form of Buddhism called Shamanism. As for the Europeans, the new and the only living and lasting element, they are of divers races. The Russians predominate largely; they are chiefly descendants of Cossacks and of exiles from European Russia. The latter have been poured into Siberia from early times, at an average rate of more than 10,000 yearly; they represent all the races of the immense empire, from the Slavic to the Tatar; all its religions, from the orthodox Greek to Islamism and fetichism; all its languages, from Russian to Persian and Roumanian; all its convict classes, from the assassin and the counterfeiter to the nobleman who defended his country in a Polish battalion. Union is henceforth assured. The Siberians, who are largely Slavs by their fathers, are absolutely Russians in language, with no dialectic differences, as, for example, in Russia itself; they prolong from the Urals to the Pacific the formidable nation which was long oppressed by Tatars and afterward by Poles.

The population increases slowly, however, owing to the number of deaths rather than to a paucity of births. The mortality among children is especially great; industry is doing nothing toward enlarging the towns and founding villages, except in the mining districts of the Urals and the Altai Mountains; and the peasant is making little effort to bring the soil under proper cultivation; and, lastly, — and this is nothing by the side of the indolence of the *mujiks* and the semi-stagnation of their families, — the Siberians have retained somewhat of the old nomadic spirit of the Slavs; from the Urals to the Pacific there are thousands of roving peasants who have left their villages, escaped convicts, deserters from the army, gold-hunters, and bigoted adventurers searching for the land of the White Water, the ever receding *Bielovodie*, the Eldorado of the trans-Uralian Russians.

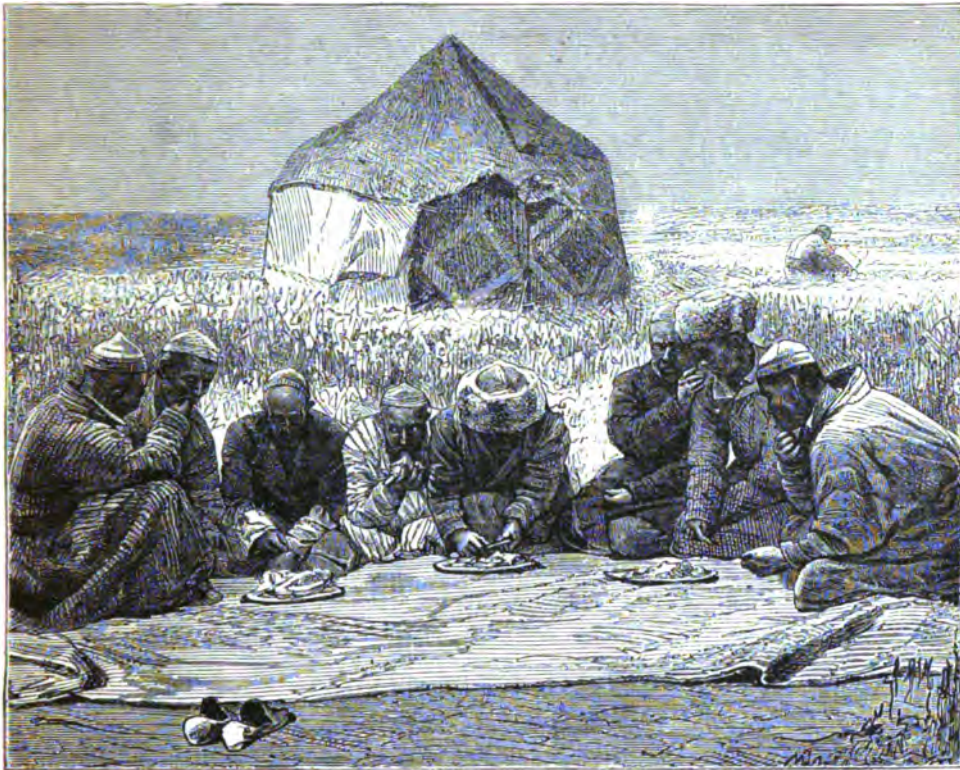
Cities. — Siberia contains no city of 100,000 souls, and the largest towns are little more than big villages of wooden houses.

Irkutsk (44,000), almost three times as far from Saint Petersburg as from Peking, borders the Angara at an altitude of more than 12,000 feet, in an excessively cold but beautiful region, containing the wonderful Baikal Lake and the Angara River.

Tomsk (37,000), on the Tom, a tributary of the Irtysh, half-way between Saint Petersburg and Peking, is the seat of the only Siberian university.

Tobolsk, which presents a magnificent appearance with its citadel on a high talus of the Irtysh, contains less than 22,000 inhabitants; it was, however, for centuries the leading city in Siberia; it is now nothing but a government capital.

Yekaterinburg (34,000), a mining and manufacturing city, is Siberian by its situation, on the eastern slope of the Urals; but the Russian government has attached vast districts of this slope, with their 1,500,000 inhabitants, to Europe; in this way Slavio Asia is robbed of a tenth of its population.



A KIRGHIZ MEAL.

RUSSIAN TURKESTAN.

Two Countries Under One Name. — Siberian Turkestan. — With all its appurtenances and dependencies, Russian Turkestan now embraces 1,347,000 square miles (or something over), with 5 or 6 million souls. In the north, the provinces of Semipalatinsk, Akmolinsk, Turgai, and Uralsk correspond to the Kirghiz Steppes. Nearly 756,000 square miles, sloping mainly toward the Irtysh, have been taken out of Siberia, of which they physically form a part; in the south, the provinces of Semiretchensk, Ferghana, Zerafshan, Sir Daria, Amu Daria, and the Transcaspian District correspond to Turkestan; or, in other words, to the land of the Turks, although the country has many inhabitants who are Turks neither in name, language, nor origin.

The common bond of these two regions, namely, Siberian Turkestan and Turkestan proper, is the great nomad nation of the Kirghiz, or Kazaks, as they call themselves. It was because the Russians were brought in contact with this Turkish-speaking people that they ended by making wide conquests in the direction of India. After having subdued one of the four "hordes" of which the nation is composed, they were obliged to restrain and then conquer the other three; and, as the Kirghiz roam over the entire plain, from the Siberian alluvia to the banks of the Sir, the armies of the White Czar at length reached the Sir, then the Amu, and, finally, the mountains of

Afghanistan. The four governments of Siberian Turkestan contain nearly 2 million inhabitants. Uralsk extends from the Ural River to the Sea of Aral and the Caspian; Turgai and Akmolinsk belong more or less to the basin of the Irtysh-Ob, through the Tobol and the Ishim; and Semipalatinsk is on the Irtysh itself. Though joined to Siberia by their physical character and by their history, they nevertheless belong to Turkestan by virtue of the Kirghiz element which predominates there. So, also, in the recently subjugated provinces of Sir Daria and Amu Daria, the number of Slavs is much below that of the Turks or Persians.¹

The Celestial Mountains.—Pamir.—Siberian Turkestan stretches toward the Irtysh, and Turkestan proper is backed against the Celestial Mountains and Pamir.

The Celestial Mountains, or Thian-shan, sparkle with snow, notwithstanding the dryness of the atmosphere, for they rise to the formidable heights of 16,000, 20,000, 23,000, or even 25,000 feet; these elevations justly entitle them to their name of Celestial Mountains. The term Thian-shan is Chinese. This chain (which only a few years ago was still thought to be in part volcanic) does, in fact, advance over vast plateaus which form a province of the great empire of the monosyllabic tongue. It overlooks Dzungaria and Eastern Turkestan. Katun, Bogdo-shoro, Dzungarian Ala-tau, Bogdo-ola, Mountains of the Heavenly King (Tengri Khan), sunny Ala-tau, Mountains of Alexander, shady Ala-tau, crest of Kashgar, Alai, and Transalai,—under these titles, and others still unknown to us, the Thian-shan chain is a maze of prodigious masses, connected on the north-east with the Altai through the Tarbagatai (11,155 feet), and on the south-west with the Hindu Kush, as well as with the Karakorum and Himalayas, through Pamir.

It is a mistake to suppose that the Slavic empire has its mightiest chain, its proudest summit, and its loftiest snows in the Caucasus; the Thian-shan, towering about 6000 feet higher, with glaciers and countless snow-masses, presses down upon the old continent with an infinitely greater weight. The Celestial Mountains are very imperfectly known; but it is estimated that their *massifs* equal all that western Europe rears in peaks or spreads out in plateaus from the firs where the sources of the Dniester sparkle to the copses of Algarves. What bald and gloomy ice-mailed Goliath rules among these snowy giants, in this infinitude of groups, masses, and crests, among these rocks of every nature? The height of Tengri Khan, rising east of Lake Issik, is estimated at over 23,000 feet; that of Kaufmann (thus named from a Russian general who was largely instrumental in the subjugation of Turkestan) at 24,600; that of Tagarma at more than 25,000,—an elevation which would rank it among the chief summits of the globe. Kaufmann is the culminating peak of the Transalai, and Tagarma of the Kizil Jart, which rises on the east over Kashgaria; the Transalai and Kizil Jart overlook Pamir.

Pamir, appropriately named Bam-i-dunya, or Roof of the World, has a mean altitude of 13,000 feet. All the cold winds of heaven whistle over this table-land, the snow sweeps down upon it from every corner of the horizon, and streams descend from it, to lose themselves, on the west as on the east, in lakes with no outlets. Who would believe that this lofty plain so near the stars, this land of lakes and savory grass, was drying up like all the rest of the so-called central Asia? It is nevertheless a fact; several of its basins have no longer an outlet, and many old Lemans have been entirely effaced. Pamir is divided into minor plateaus, which bear Turkish names.

¹ The provinces of Akmolinsk, Semipalatinsk, and Semiretchensk have recently been united, under the name of "General Government of the Steppes."

The Plains of Turan. — Plains which are much drier than the Celestial Mountains or Pamir spread out at the base of these masses toward the west, as far as the Caspian. The steppes of Lake Balkash, and those of Turan, which carry twin parallel streams to the Sea of Aral, are exposed to the cold of -20° to -30° F., and the heat of 105° to 110° . The year brings them regularly in contact with the pole and the tropics; but unfortunately it rains very little in Turan, and even the slight rainfall seems to be slowly and uniformly decreasing. Nothing can arrest the advance of the desert but a mighty system of irrigation; there is no hope, however, of wholly reclaiming this land. Even in districts where water is more abundant than elsewhere, scarcely an eleventh of the soil can be utilized, and not a hundredth, or even a thousandth part, in regions where it is necessary to have recourse to dams for the storage of the water from the snows, or to wells dug at the bottom of ravines; the two large streams of the plains and the different rivers are alone capable of starting the vegetation here and there on long stretches of country.

At present, fully half of the lowland between the basin of the Irtysh-Ob and the foot of the Iranian mountains is a most inhospitable desert. The melancholy expanses of Hunger Steppe, Ak-kum or White Sands, Kizil-kum or Red Sands, Kara-kum or Black Sands, might be partially reclaimed, and the shifting sands might become in a measure fixed by the cultivation of such saline plants and stunted, thorny, leathery trees as can be made to grow under rainless skies, in an atmosphere tossed by gales and whirlwinds, and subject to sudden changes from polar cold to torrid heat. But, instead of leaving nature to her immortal task, man is destroying all that the plains attempt to produce, and the little that is borne by the dunes. No meadows nor cultivated fields are to be seen except along the streams and the irrigating canals which bleed them.

In Turan, the wind whips the salt sands, the reddish clay, the mugwort, the spurge, and the blood-red glasswort; it whistles in the reeds of the lagoons, but it does not drive out the mosquitoes, and it often brings swarms of locusts. From the Sea of Aral to the Ural River, a distance of 300 miles, the traveller encounters but a single tree, a poplar. The Turkomans, those intrepid riders whom it is impossible to unhorse, those slave-hunters and assassins whose bloody exploits Russia has just ended, are exceedingly proud of the aridity of their country. "Never," they say, "do we rest under the shadow of a tree nor the shadow of a king." Having no forests for shelter, the wild beasts take refuge in the jungles of reeds and rushes, — the abode of the bear, the wild boar, and the tiger; this last animal is not confined, as is generally supposed, to the tropical forests.

Balkash and Issik. — The Celestial Mountains form the Ili, without which there would be no Lake Balkash; they enclose Lake Issik between two of their chains, and they send the Sir into the Sea of Aral. The Amu, more powerful than the Sir, descends from Pamir.

The Ili (900 miles) is formed by the union of two strong glacier torrents, the Tekes and the Kunghes; it waters the broad valley of Dzungaria, which lies on the best route between Europe and China, and then, entering the Slavic domains, it flows through long deltaic branches into Lake Balkash, of which it is almost the only feeding canal. Balkash, which is a marsh rather than a lake in certain portions, and which is nowhere more than 69 feet deep, lies at an altitude of 781 feet. It is more than 300 miles long, with a much less but very variable width; it now embraces hardly more than 8400 square miles, but it was, perhaps, once a vast expanse, extending

even as far as the Sea of Aral, which is to-day 550 miles distant; its diminution is due to the deposits of the Ili, and, above all, to evaporation. This lake, the clear waters of which are too brackish to be fit for drink, is encircled by naked steppes, shifting sands, deltas, and thickets of reeds; the northern shore is loftier and firmer than the southern.

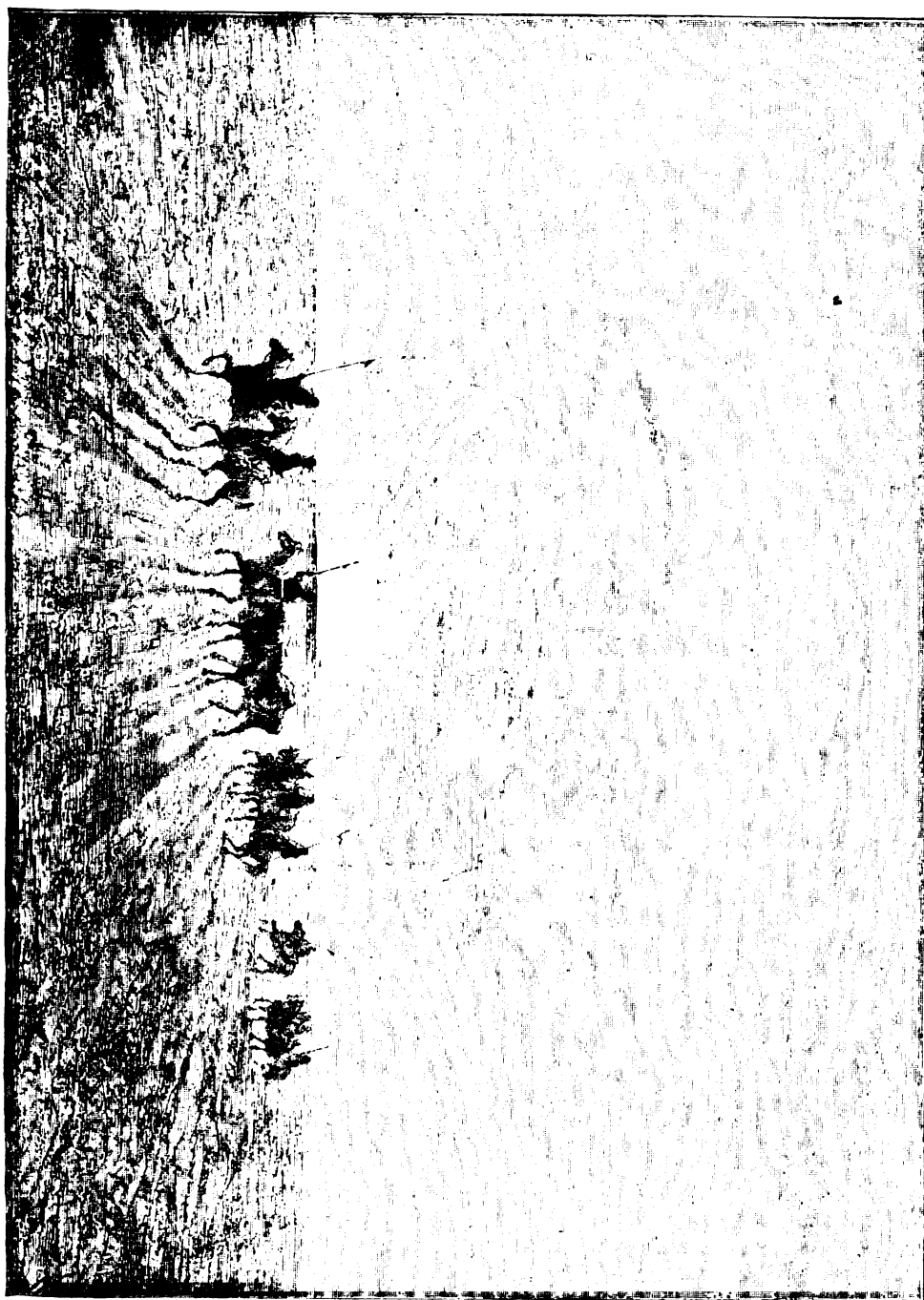
Lake Issik¹ marks very nearly the centre of the Celestial Mountains; it lies west of Tengri Khan, between the two lofty chains of the Ala-tau (Spotted Mountains), namely, the Kunghei (sunny Ala-tau), on the north, and the Terskei (shady Ala-tau), on the south. The name Issik signifies warm, and, in fact, the lake receives, along with cold torrents, copious hot streams, which, it is said, prevent it from freezing. It is situated nearly 5000 feet above the sea, and has a circumference of about 400 miles, although it has greatly contracted, and has lowered considerably during the last twenty years; there are traces of its waters 30 miles from its shores and 200 feet above its present surface.

The Sir. — The Amu and the Uzboi. — The Aral. — The Sir, the stream which the ancients called the *Jaxartes*, the Sihon of the Persians and Arabians, descends from the Celestial Mountains, principally from the shady Ala-tau, under the name of Narin; its waters are blue, for the torrents from the plateaus and mountains are purified in lakes. It falls over precipices, as yet unexplored, into the lowlands, where it encounters the Kara Daria (Black River); here it becomes the Sir, which is distributed in canals over Ferghana, formerly a lake; on its banks, farther down, lies the town of Khodjend. Beyond this point, instead of increasing in volume, it is lowered by evaporation and drained by canals; several long tributaries have gradually shrunk, and have ceased to reach it: such, for example, are the Tchu and the Sary Su (Yellow Water), which are being slowly obliterated from their mouths toward their sources, and which terminate in desolate swamps. However, at the point where the Sir divides into arms, it carries 31,250 cubic feet per second in low water, and a yearly average of over 88,250; one half of this flow is evaporated, or filters into the ground in the different branches of the delta; the other half empties into the Sea of Aral. The time is approaching when not a single drop of its flood will enter the great lake, for it will be taken up by a net-work of canals for the irrigation of the Steppe. The Sir is about 1550 miles long.

The Amu, like the Sir, has a length of 1550 miles; the ancients named it the *Oxus*: it is the Djihon of the Arabs and the Iranians. It "sponges" Pamir between the Alai, on the north, and the Hindu Kush, on the south; both these chains are of immense and almost equal altitude, and it is from their snow-masses that the great volume of the Amu is derived. The Amu is much larger than the Sir, and carries from 34,460 to 967,500 cubic feet per second, with a yearly mean of 124,000, although it traverses the Steppe without being re-enforced by a single current; all the streams on the right and the left terminate at a long distance from the banks; not even the slenderest rill brings it an offering from the Zerafshan, nor from the river of Merv, which the river of Herat has ceased to swell, as the latter is itself now incapable of forcing a way through the desert. The Zerafshan, the "gold-giver," as this Persian name signifies, springs from a magnificent glacier, which is longer than any, in the Alps; seized by canals, it dispenses water to 1750 square miles of territory, and water here is gold.

The waters of the Amu are yellow: one of the lakes from which it issues, called

¹ The expression Lake Issik-kul is tautological, for the Turkish word *kul* means lake.



IN THE GREAT STEPPE.

by the English Victoria, is a "Yellow Lake" (Sary-kul), situated 13,898 feet above the seas; and, among other turbid currents, one of its great affluents, the Surgh-ab, pours into it a red flood. Its burden of alluvia, and its mighty inundations in the season

of the longest days, make the Amu a benefactor, a restorer, a Nile. In Kharezm, or Khiva, it distributes annually 247,175 million cubic feet of water to 4100 square miles of plains, which, owing to this stream, are miraculously fruitful.

It is almost certain that the Amu formerly communicated with the Caspian through the sea of Kharezm, or Khowarezm, and the long, tortuous bed of the Uzboi. Of the sea of Khowarezm, singularly diminished by the increasing aridity of the atmosphere, the only remnant is the marsh-lake of Sary-kamysh; and the Uzboi has become a mere furrow in the desert, a ravine destitute of grass and of water, and often effaced by the dunes which the wind drives back and forth across the Steppe; its channel, which was more than 300 miles long, is recognizable in spots by the ruins of *kishlaks*, or villages. A plan has been proposed for turning the water of the Amu into this old river-bed: the work is perhaps possible, but it would be much better to establish a system of irrigation. When the waters of the Amu flowed into the Caspian, the Sea of Aral received only the tribute of the Sir, or a half of this tribute, or perhaps even less, for it is



A KIRGHIZ WOMAN, "EN GRAND COSTUME."

thought that the old Jaxartes discharged a portion of its floods into the Amu through a channel, which still exists, called the Yeni Daria. The area of the ancient sea must therefore have been much less than that of the present Aral, if it did not, in fact, become temporarily or periodically a succession of lagoons which were wholly ignored in the tales of travellers. Although it absorbs to-day all of the Sir

and all of the Amu, and many sluggish streams which escape the heat of the Steppe, it is decreasing. At present the Aral Denghiz, as it is named in Turkish, or the Blue Sea (*Siniî More*) of the Russians, is 840 miles in circumference, with an area of 25,400 square miles, a mean depth of 30 to 50 feet, and a maximum of 223. Ust Urt, which separates it from the Caspian, is an uninhabited plateau from 650 to 850 feet high, descending on the plain and on the two seas by cliffs.

The Turanians, Iranians, and Slavs. — There have been Turanians and Iranians in Turan from time immemorial. The former are in the majority; it is estimated that they are as two to one in the entire country, but they will soon yield the ascendancy to the Russians.

Among the Turanians, there are, first, 360,000 Turkomans,¹ or, more correctly speaking, Turks, — Turks in name and language rather than in origin, for during the centuries that they have been killing, burning, robbing, and outraging on the soil of Iran, Iranian blood has been unceasingly communicated to them through Persian women-slaves. They formerly roved from the Caspian to the foot of the Hindu Kush. They are less nomadic now, and they live to a less extent by marauding and murder; Russia keeps them inactive and peaceful; the capture of their citadel, Gök Tepe, and the occupation of Merv have broken up their reckless brigandage. Forced to abandon their roving habits, they will pasture their herds and distribute life-giving water over their oases, instead of slaughtering villagers, carrying off Iranians, and swooping down upon caravans.

The Kara-Kalpaks, or Black Caps, likewise Turks, have long since ceased to scour the country. They live as honest rustics, to the number of 50,000, in peaceful hamlets along the lower Amu, and on the eastern shores of the Sea of Aral, between the turbulent Turkoman and the obese and apathetic Kirghiz.

• The Kirghiz, or Kazaks, are splendid horsemen, who subsist mainly on camel's milk and mare's milk; they number fully two millions, and are divided into four "hordes";² according to the etymology of the word, this means four camps, for the Mongol term *ordu* or *urdu* signifies encampment, army, or court of the prince. The Kazaks speak a most excellent Turkish, but they are of complex origin; their ancestors formed a part of the wild multitude which Jenghiz Khan led to the conquest of the world. Among the women, and the White Bones, — that is to say, the nobles, in distinction from the Black Bones, or the common people, — most of the faces have retained the angular ugliness of the Mongol race. With their twenty times one hundred thousand men, their ill-favored, but strong and hardy horses, the bow-legged Kirghiz form the greatest mass of mounted herdsmen in the world. They are too disunited to be dangerous; they are mild-tempered, and sluggish in mind, and no longer inspire any fear in the Russians, who are already surrounding and penetrating them. In places where

¹ Out of about 1,200,000, the number at which the Turkoman nation is estimated, in Russian Asia, Persia, and the khanates of Bokhara and Khiva.

² The Kirghiz-Kazaks have been grouped for a long time into three distinct "hordes," with further subdivisions, first into races, and then into tribes, and again into sections, branches, and *auls* or communities of a few tents. Tradition traces this division into hordes to a powerful chief who left his states to three sons, the eldest of whom became the founder of the Ulu-Yuz, or Great Horde, the second of the Urtu-Yuz, or Middle Horde, and the third of the Kachi-Yuz, or Little Horde. The last two submitted voluntarily to the Czarina Anne in 1730. A large part of the Great Horde were subdued by the khan of Ferghana in 1798, and the other tribes accepted Russian suzerainty in 1819. A fourth division, known as the Inner Horde, has been recognized since 1801. It is estimated that the entire Kazak nation numbers 2,750,000 souls, in 470,000 tents. — Ed.

these Asiatics come in closest contact with the Slav, the Russian tongue is commonly used by many of them, even in their intercourse with each other.

The 350,000 to 400,000 Turkish Burut of Turan bear the name also of Black Kirghiz; they are, in fact, true Kirghiz, speaking a good Turkish idiom, and living on the rugged and cold Celestial Mountains instead of galloping over the wide plains of the Steppe; they have been modified by Mongol blood. Side by side with them, and interspersed among them, are the Kalmuks, who inhabited, more than one hundred years ago, the sands and clay of the lower Volga, and who, in 1771, took the road once more for central Asia: it was a tragic journey, but not all perished on the route, and many of the descendants of these Mongols dwell to-day on the Thian-shan.

The Uzbeks, nearly a million in number, held the supremacy before the arrival of the armies of the White Czar, and they still hold it, or seem to do so, in the states not yet formally annexed to the enormous block of the Russias. Their Turkish dialect, the Uigur or Djagtai, is a less corrupted Turkish than the Osmanli of Constantinople and Anatolia, but their race has not the unity of their language; it has been modified from century to century by Mongol elements, and to a still greater extent by the Iranian women whom the Turkomans carried off from the markets of Khiva, Bokhara, and every city that could pay ready money for stalwart youths and graceful girls; moreover, the Uzbeks have always allied themselves with the more or less Persian, more or less mixed families which are to be found in great numbers in their cities. They resemble the whole Turkish race, which is dull but honest, and essentially simple and rustic.

The Sarts, the townsmen of Turkestan, have the blood of two peoples in their veins; there are very few of them who do not count at the same time Turanians and Iranians among their ancestors, — with evidently a larger proportion of the latter than the former. As they are shopkeepers and merchants, the Sarts have no real nationality, no distinct type, and no language of their own; they are cosmopolites, lying in wait for customers; here they speak Turkish, there Persian.

Under the name of Galchas, their half-brothers the Tadjiks, otherwise called Persians, occupy Pamir as a nation, and in general the "Kohistan," or the mountains, on the upper Amu and on the Zerafshan; they do honor here to the old race of Iran in physique and features, in their uprightness and their vivacious wit. In the lowlands, they are to be met in great numbers, as often among traffickers as among owners of the soil; we admire their handsome beards of the glossiest black, their manly and gracious countenances, but we fear their suppleness of conscience and character.

As for the Russians, immigration is rapidly augmenting their numbers in Turan; it is claimed that from twenty to thirty thousand Slavs arrive each year to re-enforce this young Russia of Turkestan, but no comparison of enumerations has yet shown what exaggeration there may be in these figures. These colonists are sent out from all the swarming governments of Great or Little Russia, and from the Siberia of the Irtysh-Ob. The Muscovites will doubtless reclaim, by the establishment of civil peace, by the planting of trees, and, above all, by irrigation, this vast country, which once possessed more inhabitants and better cultivated gardens. "Formerly," the legend says, "a cat could jump from roof to roof from Tchémkend to the Aral."

Cities. — There are 122,000 souls in Tashkend, the capital of Russian Turkestan. The Sarts form the predominant element. Tashkend is built on an unstable soil, bordering the canals drawn from the Tchirtshik, a right affluent of the Sir. This

city, which is very proud of its rank, is, nevertheless, built of sun-dried bricks, like the most melancholy *ksurs* of the Sahara.

Samarkand (pop. 33,000) is situated 2150 feet above the sea, in ancient *Sogdiana* (so named from the *Soghd*, our Zerafshan), in the bosom of a charming valley. This more than half Tadjik city was the capital of the empire of Tamerlane; it was this crippled conqueror of Mongol race who made Turkish the great tongue of central Asia; he chose it for the imperial language instead of his maternal idiom, and instead of Persian, which was spoken in the richest and most enlightened provinces. Nothing remains of the era of Tamerlane in Samarkand but a few domes and minarets and some superb ruins; but the upper valley of its river, the splendid Kohistan, may again become a paradise of earth.

South of the 38th parallel of latitude, that is, under the same sun as Sicily, though in a very different climate, a city rises out of the Black Sands, at an alti-



THE MOSQUE OF HAZRET, AT TURKESTAN.

tude of 886 feet, on the Murgh-ab; it is exposed to the heat of 113° F. in the shade, and it is likewise carpeted with snows in December and January. This city is Merv, more famed than it is rich or beautiful. Merv recently opened its gates to the Russians, after having long withstood them under the protection of its desert, which was thought to be an insuperable obstacle to their approach. In the Middle Ages, men of every tongue came here to study what Mussulman savants had translated or paraphrased from Greek lore. To-day Merv possesses very little of the sciences, and no industries; its sole advantage lies in the fertility of its oasis, which is famous in Iran as in Turan. This "Oriental garden" owes its life to the floods of the Murgh-ab, which are dammed up and distributed over the best portions of the Mervan territory through 260 to 280 miles of canals. The Mervan territory includes 2150 square miles, with 250,000 inhabitants.

Bokhara and Karategin.—Bordering Russian Turkestan is the so-called independent Turkestan; it is, however, independent in name only, for it mechanically obeys the commands of the Czar. Bokhara and Khiva know that their khans are "do-naught" khans.

Though moving now at the beck and call of a non-Mussulman ruler, Bokhara was once the "lofty pillar of the faith," the beacon-light of Islam, and the seat of the most renowned Mussulman schools; at the same time it was a commercial city, a rendezvous for caravans, a mighty metropolis with shady canals, gardens, orchards, and sumptuous villas. The "city of temples" is to-day a town of 100,000 inhabitants, 60,000 of whom are Iranians; it has lost the strength of its walls and the magnificence of its oasis. The wealth of Samarkand makes the poverty of Bokhara; the more the queen of the Kohistan bleeds the "gold-giver," the less water this life-dispensing stream pours into the *ariks*, or canals, and without these canals Bokhara must perish. At the same time that the water of the ariks is failing, the sands are moving in dunes toward the city, and menacing it with a grave beneath their masses.

The khanate of Bokhara, which is estimated at 92,300 square miles, with 2,500,000 inhabitants, controls two very dissimilar regions; on the north-west, the country of Bokhara, where the Uzbeks predominate, and which is a level, unhealthy tract stretching along the banks of the Amu, arid at a distance from the canals, and seemingly doomed to destruction by the implacable advance of the dunes; on the south-east, Karategin, which is a superb Kohistan, sparkling with waters, checkered with grass-plots, capable of a luxuriant vegetation, and inhabited by Galcha herdsmen and husbandmen.

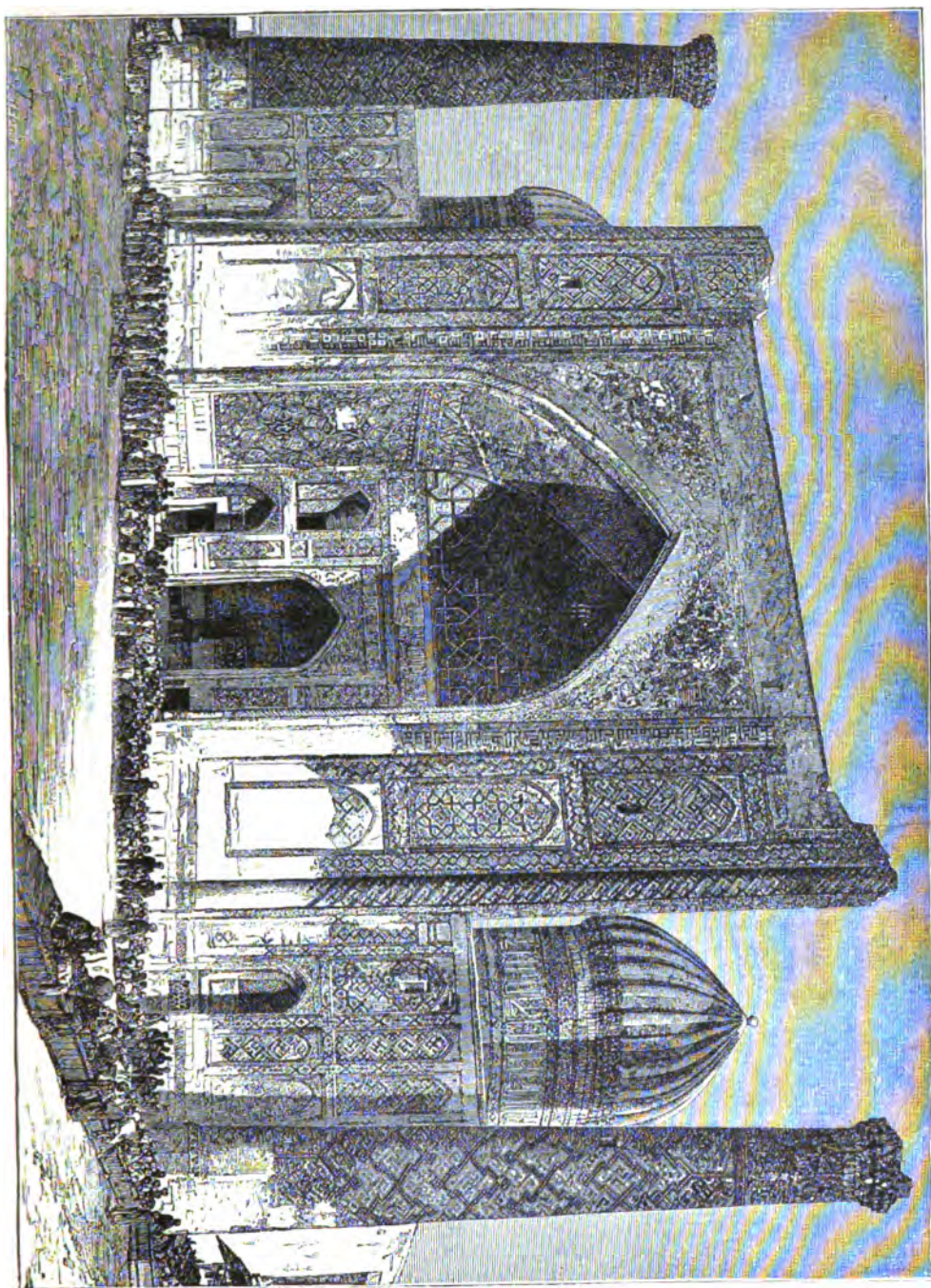
Khiva. — The other Russian satrapy, the khanate of Khiva, or the country of Khwarezm, lies on the left bank of the lower Amu; it is supposed that 500,000 to 700,000 inhabitants live there, on 22,320 square miles, or rather on the 5200 which are watered by the canals lavishly supplied from the Amu. No finer oasis exists than the garden of Khwarezm, which is besieged by the Black Sands on the south, and, on the other side of the Amu, by the Red Sands; no cooler shade is to be found in all the burning desert than that of its vigorous trees, whose roots are wet at all seasons by water drawn from the Tchingerit and the Ingrik, the principal canals. With proper distribution, the Amu might fructify 25,000 square miles of territory.

Khiva, the wretched metropolis of this doomed khanate, is peopled by Uzbeks and Iranians; it owed its former wealth to the superiority of its oasis, and to its traffic in Persian slaves; but men, women, and girls are no longer sold in the Khivan bazars. After having been rudely startled from its slumbers by the roar of the Russian cannon, the royal city has once more fallen back into Oriental inactivity.

Afghan Turkestan: Badakhshan, Kunduz, and Khulm. — At the foot of the Hindu Kush, on rivers flowing toward the left bank of the Amu, dwell a million subjects of the Afghans, a rude people living back of these same Hindu Kush, on lofty plateaus, which in winter are covered with snow. As elsewhere in Turkestan, these million Asiatics spring either from Iranian or Turanian stock; in the east, in the mountainous district, on the slope of Pamir, the inhabitants are genuine Tadjiks, and speak a pure, archaic Persian; in the west, in proportion as the mountains give place to lowlands, the torrents are arrested in their course at a distance from the Amu, and the Turkish blood prevails.

Badakhshan, therefore, which has Pamir on the east, is wholly Iranian; this charming, fresh region borders the basin of the Indus, but the Hindu Kush masses, which separate it from India, bar the horizon at such altitudes that their two great passes open 15,750 and 16,700 feet above the sea.

In the west of Afghan Turkestan, in Kunduz, the Uzbeks predominate; but here the running streams, green meadows, and dense shade of favored Badakhshan



THE COLLEGE OF SHIR-DAR, SAMARKAND.

have disappeared, and the irrigating stream from the famous col of Bamian is exhausted on the way.

Khulm, west of Kunduz, is drier still; Khulm is the old *Bactriana*, where the very ancient city of *Bactra* (the Ulm el-Bled, or Mother of Cities, according to the Arabs) had the supremacy; this city, which was levelled by Jenghiz Khan, this Mecca of Zoroaster, is to-day only a formless heap of sunburnt bricks, bearing the name of Balkh. West of Khulm the aridity of the soil increases, the southern mountains are lower, and the water more scant; we are nearing the Great Black Sands.

CAUCASIA.

The Caucasus and Anti-Caucasus. — The chain of the Caucasus has a length of 750 miles, with a breadth ranging from 60 to 120 or 150. It trends from north-west to south-east; the western end of the range differs in all respects from the eastern. On the west it begins in regions bordering at the same time on the Black Sea and the Sea of Azov. The country here consists not so much of solid land as of bays and ponds. From these flat districts to the defiles of Dariel, which are commanded by the trachytic Mount Kazbek (16,552 feet), on which eight glaciers gleam, the mountains are narrow, and from five to ten times as humid as in the east. There are more snow-masses here, more ice-fields, and a greater number of powerful, violent torrents; these torrents are the sources of the Ingur, the Rion, the Kuban, and the Terek, — that is to say, of the chief Caucasian rivers, with the exception of the Kur. But even among the majestic peaks of this west the glaciers are retreating, either temporarily or permanently, owing to the increasing desiccation of the centre of Europe-Asia. If nature, obedient to some cosmic law, is devouring these ice-fields, we are powerless; but man is rashly challenging the future here by felling the woods.

Mount Elbruz, the "ice-mane," an old volcano, now cold and mute, rises in this half of the chain, on a spur north of the main ridge. Its altitude of 18,526 feet makes it the culminating summit of the Caucasus as well as of Europe, unless we consider the Caucasus as belonging wholly to Asia, by virtue of its connection with the masses of the Anti-Caucasus.

In the Pass of Dariel, the rainfall is not more than a third of that on the tops near the Euxine; and from this point the rains and snows diminish toward the south-east, the forests become sparse and lose their verdure, and the mountains continually increase in breadth and break up into chaotic masses, — here is Daghestan, the Turko-Persian name of which signifies the "mountainous land." From the peaks and out-masses of Daghestan, one sees at his feet the Caspian; the peninsula of Apsheron, which possesses wonderfully copious springs of petroleum; and Baku, celebrated for its naphtha-wells. The sky here is brazen; the annual rainfall is 9 inches, against 94 at Kutaïs, and 120, or even 150, on the high crests of the western Caucasus. In the interior, between the chains of the Anti-Caucasus, this true manna from heaven is still rarer than at Baku; Elizabetopol receives only 8 inches, and Aralikh, at the foot of Ararat, 6, — a Saharan dryness. In such an arid atmosphere the snow-line is neces-

sarily at a great altitude. Notwithstanding the incomparably greater humidity of the slopes between Dariel and the Black Sea, the line of persistence is on the average much higher ¹ in the entire Caucasian chain than in the Pyrenees.

With Elbruz and Kazbek, the loftiest and noblest summits of the Caucasus, we may mention Koshtan-tau (17,100 feet), Dykh-tau (16,925 feet), Ushba (16,493 feet), terminating in two peaks of indescribable beauty, and Tetnuld, which resembles the Jungfrau. South of the Caucasus are masses which have been named the Anti-



A CIRCASSIAN BAZAR.

Caucasus; they are connected with the maze of mountains in Armenia, Persia, and Asia Minor. Among them we note Abul (10,961 feet), an extinct volcano, overlooking a desolate plateau, near the Kur; Ala Göz (13,747 feet), another extinct volcano, once violently active, surrounded by affluents of the Araxes; and, mightiest of all, Ararat (16,969 feet), a living volcano, south of the Araxes, near the present boundary of Caucasia.

The Rion. — The Kur and the Araxes. — The western Caucasus sends down to the

¹ About 2000 feet.

Black Sea (which is very deep¹ here), first, the short torrents of Abkhasia, then the Ingur, the Rion, and the Tchoruk.

The torrents of Abkhasia fall rather than flow into the sea, so close is the steep, snow-laden, rain-beaten sierra to the opulent shore, with its mild, but wet and malarial climate. The Ingur is bountifully supplied from its mountain, which is covered toward the summit with glaciers and snow-masses, and below with deep forests; the sky, too, is heavy with clouds. The Ingur passes from the upper cirques to the valley beneath through 50 miles of frightful gorges; with a breadth of 15 to 30 feet, it descends between gloomy granitic and schistose rocks, with trees overhanging the black abyss at an elevation of 650 to 1300 feet. The Rion, formerly the *Phasis*, in Mingrelia (once *Colchis*), rises in immense ice-fields; it roars through narrow defiles, then is stilled in swampy plains, and terminates in a delta near Poti, the approaches to which port are being gradually obstructed by the deposits of the stream. So much rain and snow fall in its basin of less than 6200 square miles that the Rion carries down to the sea 17,500 cubic feet of water per second; a flow of 34,145 (?) is even claimed for it. The Tchoruk is nearly as large as the Rion; for the favored country of Lazistan, through which it flows, is almost as wet as Mingrelia, owing to the excessive humidity of the mountains. The stream ends in a delta near Batum, which has a better harbor than Poti.

The course of the Ingur, the Rion, and the Tchoruk lies through Georgian territory. The Kur, which is longer, and faces the eastern horizon, is likewise Georgian in its upper course, then it enters Turkish territory, and empties into the Caspian; its great affluent is the Araxes, which is at first Armenian, but which likewise becomes Turkish,—we have reference to the language spoken on the banks of these rivers, and not to the people who rule there politically.

The Kur, called in the harsh Georgian tongue the *Mtkvari*, takes its rise in the Anti-Caucasus, in the district of Kars, at an elevation of 10,200 feet. It twists through the entrails of the volcanic plateau commanded by Mount Abul, then lowers its bed 535 feet by a succession of rapids and falls. It receives more water from the snows of the Caucasus than from its native mountains. Except on the very lofty buttocks and crests, the atmosphere and soil of its basin are so dry, so many canals drain off its waters and those of its affluents, that, even with the Araxes (as large as itself), the Kur does not discharge more than 6850 cubic feet per second in low water, and 23,870 on the average during the year; this flow is probably less than that of the Rion, whose drainage area is only a tenth of its own. Although it is a turbid stream, the Kur has not sufficient force to diminish the Caspian rapidly; the gain in thirty-three years (1829–1862) was only about 50 square miles, or one and a half per year.

The Kur formerly reached the sea without the Araxes; the latter was once independent, and inclines to become so again, it is said, by bearing to the right. The Araxes flows from the Armenian plateaus; it rises in the Bingöl Dagb, or Mount of the Thousand Fountains. Like the Kur, it is strangled in black gorges; this Armenian river *par excellence* passes the base of Ararat, the Armenian mountain *par excellence*; and farther down, in Erivan, it descends in falls 1300 feet. It joins the Kur in the excessively arid steppes of Mugan, a fulvid, dusty tract that might be made productive by irrigation. One of its left affluents, the Zenghi, the river of Erivan, brings to it during the summer the tribute of Göksche Denghiz ("blue lake"). This lake of 530 square miles, with a depth of 360 feet, the Sevangha or

¹ Reaching 1200 feet.

the Armenians, has no outlet during the cold months ; it lies at an altitude of 6339 feet, in the midst of porphyritic rocks and gray, red, and black lavas, all destitute of grass and forests.

Climate. — The azure Sevangha would be a beautiful basin if its grandeur were



SUANETIANS.

only softened by the influence of woods and verdure, but it sleeps under the driest sky of the Anti-Caucasus. What freshness could be drawn from such a climate? Not far from the lake, and 3000 feet lower down, the temperature of Erivan ranges between -27.4° and $+113^{\circ}$ F., and this in a rainless region. Except on the very

humid slope of the Euxine, the Transcaucasian climate everywhere resembles that of Erivan, and in some places it is even icier, hotter, and thirstier.

Peoples and Languages. — More than 150 peaks in the Caucasus surpass 9500 feet; if we can rely upon Pliny's statements, in his time there were nearly that number of tribes, languages, and dialects in Colchis alone: he tells us that one hundred thirty interpreters were required at Dioscurias. The Caucasus is still an encampment of peoples and a Babel of tongues. In the single government of Daghestan, 600,000 inhabitants speak thirty different idioms, and one of these thirty is heard only in the twenty-eight cottages of the hamlet of Innukh; but it must, in justice, be stated that these thirty languages are not irreconcilable; many are nothing more than dialects, and these so shade into one another that the whole score and a half group themselves into five tongues. It is impossible to say to how many the 130 idioms ascribed to Colchis by Pliny could be reduced, or the 70 which Strabo set down to the Caucasus, or even the 800 which some writers generously accredited to these mountains.

But whence came all these tribes, all these clans, all these tongues? The great Caucasian range, stretching between two seas, between two worlds, between two highways of the nations, has always offered a refuge to the peoples vanquished and broken in the plains and on the plateaus out of which it rises with majesty.

The Tcherkesses. — The Slavs. — The various remnants of peoples mingled here without blending; each found in some cirque, or on some crest, a holy of holies difficult to violate; but Russia, after two centuries spent in their conquest, has finally subjugated these mountains, and in a few years she has stripped them of their most valiant defenders. Fully 500,000 Tcherkesses, or Circassians, and Abkhasians — the former, it is said, furnishing some of the most superb specimens of the human race, and the latter a very handsome people — have fled from the paternal summits; the Abkhasians occupied the south of the chain, the Tcherkesses the north, between the Black Sea and the silvery top of Elbruz, in the basin of the Kuban.

Like the Albanians, these intrepid fighters, highwaymen, and brigands carried a whole arsenal in their belts; they willingly sold their daughters to the great lords and townsmen of the Orient; and they cherished for Russia the hatred of the conquered for the conqueror, of the robbed for the robber, of the Mussulman for the Christian. Fleeing of their own accord, or driven from their homes, they have been settling since 1864 on the domains of the Grand Sultan, wherever the Turk has condescended to quarter them in order to strengthen the Osmanli element (as in Asia Minor), or to isolate the Christian element (as in Bulgaria). They have perished in great numbers in their mountains, hated by their neighbors, and treated by them with the severity of the mountaineer who was formerly a man for war and the vendetta; the Russian has seized their lands, meadows, and water powers, and, at peace now in these valleys, where for two hundred years he was on the alert, he chants his Slavic song before their abandoned cemeteries. Settlers to the number of 54,000, Great Russians or Little Russians, arrived here in a single year, to replace the banished or the dead.

The Russians have not exterminated the Ciscaucasians of the centre and east of the chain to the same extent; there are Kabardan Tcherkesses still on the upper Terek. Adjoining these magnificent Kabardans dwell the Ossetes, or Iron, an ill-favored race. Daghestan likewise retains its peoples, namely: the 200,000 Tchetchens who, under Schamyl, still held out against the armies of the Czar when the Circassians had already covered the entire route of their sorrowful exodus with their



THE SHORE OF THE BLACK SEA AT TREBIZOND.

dying; and, east of the Tchetchens, the Lesghians, estimated at 500,000, and grouped in numerous clans, of different idioms.

The Georgians.—The Georgians, whether Kakhetians, Imeritians, Mingrelians, Suanians or Suanetians, or Lazi, are the most beautiful of all the beautiful Caucasians. They live on the upper Kur, the Ingur, the Rion, and the Tchoruk, and in Turkey in Asia they extend beyond Trebizond. These Grusians, as the Russians call them, were not brought into the Slavic empire by force; fear and hatred of the Infidel, of the Turk or the Persian, drove them into the arms of the giant; and in 1799 the Georgian king bequeathed his people to the Russian emperor, whom the nobility of the country have since faithfully served in camp. Under favor of peace, which they scarcely knew before, these men have powerfully augmented. They are nevertheless invaded by Europe and Armenia; Europe strews their country with Cossack and Russian settlers, and even with Würtembergers, whose Swabian coarseness, we are told, is speedily transformed here into Oriental delicacy; Armenia sends them Armenians, who are the Jews of the Caucasus, and who, as bankers, usurers, and “operators,” are ready to fleece their victims out of the last cent; little by little the lands of the Grusians, those of the nobles as well as of the people, are passing into the hands of these pawnbrokers. Whether Aryans or not, the Georgians, who are very probably brothers of the Tcherkesses and Lesghians, have remained Christian, while their blood relations (all pre-modern and recent mixtures aside) have at different dates embraced Mohammedanism. In their very harsh language they call themselves *Kartvel*. The Georgian tongue, which is broken up into numerous dialects, seems to have no affinities with any other; it is neither Aryan, nor Turko-Mongol, nor Semitic; it is perhaps the sole remnant of a language which was once widely spoken.

The Turks.—The Turks and Tatars of Caucasia, who are devoured, like the Georgians, by Armenian usurers, inhabit the middle and lower Kur and the middle and lower Araxes. They possess here, not less than elsewhere, virtues which are rare in the Orient and over the entire globe, namely, kindliness, simplicity, and honesty,—and tolerance, although good Mussulmans. They are polyglot to a certain degree; they speak an almost unalloyed Turkish, and sometimes Arabic, sometimes Russian, sometimes Persian; this latter language is the maternal tongue of their neighbors in the mountains around Lenkoran, which rise on the Persian frontier, on the border of the Caspian Sea.

Armenians.—The Armenians, who live south of the Georgians and the Turks, in the basins of the Kur and the Araxes, call themselves *Hai*, or *Haikhans*, and they give the name of *Hayasdani* to their country, which comprises also extra-Caucasian lands,—namely, in Turkey in Asia, the mountains around Lake Van, and the region about the parent branches of the Euphrates; and in Persia, a few small districts. But in both these countries, among the Sunnite Turks as well as the Shiite Persians, they have a tendency to mass themselves toward the north, on Russian and Christian territory, where, it is said, the long dormant national sentiment is gradually awaking. Their number is variously estimated at from three to four millions; they are dispersed far and wide in Asia, and in Turkey, Hungary, and Russia, in Europe; there are 150,000 in Stamboul alone. They probably do not number much over 2 millions, 1,800,000 of whom form the main trunk of the nation around Mount Ararat; the rest are scattered, and generally denationalized as to language, though not as to religion, for they are very faithful to their Christian sect. They resemble the Jews in their steadfast fidelity to old rites and ceremonies; and, like these same Jews, they

are by nature barterers and traders; they lie in wait in the towns to plunder Turk, Tatar, Georgian, and even Russian.

Wherever the Armenians have not ended by adopting the languages that press upon them, notably the Turkish at Constantinople and in various sections of Asia Minor, they speak a very ancient idiom, which has especial affinity with the Zend, or Old Bactrian. Armenian is consonantal and exceedingly rough, but powerful and plastic, and admitting of extended combinations of roots in compound words; it has deteriorated somewhat during the thousands of years that it has been brought in contact with the Semitic and Altaic families; but time has wrought fewer changes in the speech of the Haikhans than in the people itself, which has been remoulded by a thousand different elements in the obscure conflict of races in the Orient.

Population. — Cities. — It is thought that the Armenians contribute 800,000 to the population of Caucasia, the Georgians 1,200,000, the Turks 1,400,000, and the Russians about 2,000,000. These last numbered 840,000 in 1858, against 1,400,000 Lesghians and other mountaineers, who are now reduced to a million. There are 120,000 Persians.

A population of 7,458,000 on 182,500 square miles (86,575 of which are on the northern slope) gives about 41 persons to the square mile. Caucasia was once much more densely peopled, and it is even inferred from a sort of census that it contained 16 million souls at the beginning of the thirteenth century. It will easily support as many inhabitants as it did in the Middle Ages, when all its waters shall have been turned to account in irrigating the fields of the Steppe and the valley.

The capital, Tiflis, 1204 feet above the sea, is in Georgia, on the Kur; it has 105,000 inhabitants, the most motley multitude in the world. First of all, there are nearly 40,000 Armenians, about 25,000 Georgians, and more than 20,000 Russians.

At a long distance from the Georgians, whose little market-towns are built around old churches of the purest Byzantine style, the capital of Russian Armenia, Erivan (pop. 12,500), occupies a site on the Zenghi; it was a city of Turkish speech when, during the present century, Russia seized it from the Persians. It is situated in a malarial, desolate region, with the imposing mass of Ararat on its horizon.

On the plateau which forms the Kur, the recently conquered city of Kars (pop. 10,000) menaces the high plains of Anatolia and the basin of the Euphrates and Tigris; the Russian is there forging the chains of Asia Minor. The town is situated on blackish basalts, at an elevation of 6070 feet.

ASIA MINOR, OR TURKEY IN ASIA.

Name. — Extent. — When the name Asia was extended from the country of Sardis (later the country of Ephesus, and to-day that of Smyrna) to the neighboring districts, and finally to the entire continent, the term Asia Minor was adopted to distinguish this early Asia from the great block which included Persia and Arabia, and, beyond the famed Indus and Ganges, fabulous regions, whose peoples and kings the world knew nothing about. The Greeks, who peopled with their colonists, or attracted to their speech, countries of all languages, settled early in the two Semitic lands of Syria and Judea. Beyond the Euphrates and the mountains, their influence radiated

as far as Bactriana. But the migrations of the peoples pushed the Turanian barbarians against the brilliant Hellenic cities, and now the Turks are masters politically of Asia Minor, at the same time that they form the basis of the peasantry on the high plateaus. The term Turkey in Asia is, therefore, a legitimate title. The country embraces about 730,000 square miles, with 15,470,000 inhabitants; this latter number is, however, largely hypothetical. Deducting the territories recently conquered from Arabia, Asia Minor comprises nearly 485,000 square miles, and more than 14 million souls; it divides naturally into the plateau of Anatolia, the basin of the Euphrates and Tigris, and Syria.

Armenia and Anatolia. — Ararat and Taurus. — The plateau of Asia Minor joins that of Armenia, forming with it one and the same table-land, and both lie under the same harsh climate. A line drawn from the extremity of the Gulf of Iskanderun or Alexandretta to Lake Urumiah traces accurately enough the southern boundary of this elevated tract.

In the extreme east, on the confines of Turkey in Europe, rises the isolated peak of Mount Ararat; it is black with lavas and white with glaciers, for it towers 2600 feet above the line of perpetual snow. And yet it sends little water into the surrounding valleys; the volcanic ashes, the scoriæ, the pores and fissures absorb the moisture, which possibly gathers in subterranean streams that reach the Araxes, not far away to the north. With an altitude of 16,969 feet, Ararat commands the Anti-Caucasus, a mass thus named because it faces the Caucasus chain, across the valleys of the Rion and the Kur. To find a loftier summit we must travel 270 miles in a straight line to the north-west, to Elbruz, which looks out on the Black Sea and the low steppes of Russia; or 525 miles to the south-east, to Demavend, which overlooks the Caspian and the high steppes of Iran. The country stretching westward from the Titan of the Araxes is grand, but its grandeur has a melancholy character. Armenia has lost, if, indeed, it ever possessed, the vast forests needed to soften its cold, dry clime, and to drape its rounded eminences, its dumpy rocks, its peaks, and its gray flanks. The brooks and torrents formed by the snow-meltings or the storms often flow between treeless banks; but they crash in cataracts down descents measuring 10,000, 7000, 6000, or 5000 feet from the summits to the socle of the plateau, and they reflect the heavens in their limpid floods. These streams, which are countless, unite in powerful rivers; the Shatt-el-Arab, formed by the Tigris and the Euphrates, carries in part Armenian waters.

The mountains rising near the sources of the Euphrates have peaks of over 10,000 feet. Bingöl Dagh (12,310 feet), south of Erzerum, is the chief reservoir of the Araxes; its top, according to the Armenian legend, contained the Paradise lost by our first parents, and the lake of Immortal Life, — a lake from which only the men of fable have drunk, and which, like the Fountain of Youth, is hid from mortals. More than one of the mountains of upper Armenia recall by jets of steam and smoke the fact that they once blazed; the entire country consists of lava, basalt, and trachyte, with gorges between rocks, the colors of which retain some reflections of the old fire; among the extinct volcanoes are Tandurek (11,696 feet) and Sipan (11,811 feet).

In Anatolia are mountains that intertwine or branch confusedly. These bear different names, the greater part of which are Turkish; others are Persian or Kurdish; others are distorted and corrupted forms of the old Greek, and still others are derived from tongues that long ago disappeared from this soil. The ancients called them Taurus and Anti-Taurus, names which everything induces us to preserve. We have,

then, in this corner of Asia, Libanus and Anti-Libanus, Caucasus and Anti-Caucasus, Taurus and Anti-Taurus. The culminating peak of the Taurus is Erdjish Dag, the *Argæus* of the ancients; it overlooks the plateau of Kaisariyeh, formerly *Cæsarea*, nearly in the centre of Anatolia; its altitude of 13,000 feet, intermediate between that of the Alps and of the Pyrenees, admits of snows, even in this climate; it is an extinct volcano. Hassan Dag (9514 feet), Metdesid (11,407 feet), not far from the Cyprian sea, and numberless other lava-mountains, have also ceased to eject their contents. The altitude of the socle deprives these peaks of much of their grandeur, for the Anatolian plateaus have an elevation of 2950 to 4950 feet, with a mean of about 3300.



THE LAKE AND FORTRESS OF VAN.

The Taurus ranges, whether limestone or volcanic, have a few wooded slopes, covered chiefly with pines and cedars. The high plains are shut off from the rains, and stretch away in thirsty steppes, which are swept by cold, violent winds from the snow-charged mountains; and, when the gales cease, the heavy heat of the sun is overpowering. The rivers that are not cradled in the mountains drag their sluggish waters languidly across the plateaus. Some of the streams terminate in lagoons with no outlet; others reach the rim of the plateaus, and dash impetuously down to the Black Sea, the Mediterranean, or the Euphrates. To the Euxine flow the Tchörük, which is now Russian in its lower valley; the Yeshil Irmak, formerly the *Iris*, which ends in a broad delta; the Kizil Irmak, or Red River, the ancient *Halys*, the waters

of which are slightly brackish, as the Greek name indicates; the Sakaria, the old *Sankarios*, which is shorter than the Kizil Irmak, but which carries more water than the latter, although it has ceased to receive a multitude of lakes, whose floods have become brackish with the loss of their outlets. The most extensive of these briny basins is the Tuz-gol, or Salt Lake; it has an area of at least 375 square miles; it is saltier than the Dead Sea itself, and it is doubtful whether the stagnant waters are more than six feet deep in summer.

Rivers, heavily charged with the alluvia derived from their small catchment basins, flow to the *Ægean*, and, farther south, to the Mediterranean. The Ghediz, the ancient *Hermos*, threatens to close the harbor of Smyrna by joining the two shores of the gulf with its deposits. The Kutschuk Mender, or Little Mæander, was formerly the *Kuïstros* (Cayster); the Bojúk Mender, or Great Mæander, drains something like 7000 cubic feet per second, on the average, from its area of 9300 square miles, in a course of 240 miles; it is tortuous, though not sufficiently so to warrant the bestowal of its name on the convolutions of rivers, and on excessively sinuous currents. In 2300 years it has filled up 125 square miles in the proud Milesian gulf, and has converted the waters, which, in ancient times, bore the boats of multitudes of colonists toward the Mediterranean shores, into a fetid marsh; and Miletus, the "mother of cities," is no more.

Then follows the Ak Su (White River), the old *Kestros*, which undoubtedly receives, through subterranean channels, the tribute of the extensive and beautiful Lake Egerdir (3050 feet above the sea); the waters of this basin are not salt, although it has no visible outlet. The Keupro Su (River of the Bridge) formerly bore the sonorous name of *Eurymedon*; the Manavghat that of *Melas*; the Gök Su (Green River), that of *Kalykadnos*; the Tarsustchai, or River of Tarsus, was the chill *Kydnos*, issuing from charming rock-springs under the shadow of giant cedars, mighty oaks, and tufted plane-trees. The Seihun, the ancient *Saros*, has a flow of 8800 cubic feet per second, the drainage of 8650 square miles, in a course of 280 miles. The Djihun is the old *Pyramos*; scantly than its neighbor and rival, the Seihun, it carries only 3355 cubic feet per second for a course equal to the Seihun's and in a greater basin (9300 sq. m.); both have singularly diminished the Gulf of Alexandria.

Among the lakes of Asia Minor, Lake Van, the Tosp of the Armenians, ranks first in size as well as in beauty. It lies at the foot of Hassan Dag, at an elevation of 5330 feet, and covers an area of over 1500 square miles; the snows of its mountains are not all melted in summer; its salt waters have no visible outlet. If it is drained through hidden channels, they absorb less water than is poured into it by the torrents; the lake is enlarging, either on account of the obstruction of outlets, or because more water falls now than formerly in Armenia; — the yearly rainfall, which is about 20 inches, is abundant for Asia outside of India, Indo-China, China, Japan, and the islands. The lake already threatens Erdjish (pop. 30,000), a very ancient city, built at the base of an enormous rock.

Climate. — When we descend from these high plains, with the streams, toward the Euxine, the Mediterranean, or the Euphrates, everything changes suddenly with the last turn of the defiles. We have escaped, like the torrents, from those plateaus where, near Erzerum (the annual mean of which is not 44° F.), the hamlets are buried in the earth, with only the cottage-roofs above the surface. If we travel northward, toward the Black Sea, we find along the humid coast a climate which is mild, except

for the north winds that blow from the Russian Steppe, and which has a yearly mean of 57.2° F. It is said that Europe received more than one of her fruit-trees from this region. Descending toward the Mediterranean, we are greeted by warm breezes, clear skies, and azure waves; on the hills are tawny or gilded rocks, and gray olive-trees, for this is the Mediterranean climate dear to Minerva, whose tree flourishes equally from the Bætis to the Mæander. Smyrna has an annual mean of 65.7° F.; however, snow falls sometimes on its rose-gardens, and the palm-tree does not thrive before the island of Patmos is reached, which lies much farther south, opposite the mouth of the Mæander. Farther south still, on the southern shores of Lycia and Cilicia, the climate is almost Egyptian, with a yearly mean of 69.8° F. Descending

toward the basin of the Euphrates, we encounter a parched, implacably luminous nature, and in the basin itself a veritable "Arabistan," where the heavens, earth, and man are Arabian.

Turks, Greeks, Armenians, Kurds. — It is thought that the plateau of Turkey in Asia supports ten million inhabitants, or something over; these are divided among Turks, the predominant people, and Armenians, Greeks, Kurds, and lesser nations.

The Turks, or Osmanlis, are estimated at 7 millions; but who has enumerated them? They dwell chiefly on the high plains of the interior; some are settled, some half-nomad, and others wholly so. These last, called Yuruks, live in goat's-hair tents all the year round. Various Mussulmans who are in no sense Turks are included among the Osmanlis, — Bosniaks and Bulgarians, Georgians and Circassians, Albanians, and even some thousands of Negroes. The Turks are truthful, courageous, laborious, kind to man and gentle



AN ARMENIAN GIRL

with animals; they are gaining in the east on the Armenians, and other small peoples, and possibly also on the Kurds; but in the west, toward the Mediterranean, they are diminishing sensibly, notwithstanding their bony strength, and their life in the fields as husbandmen or shepherds. They are crushed with taxes and plundered by officials, and they alone furnish soldiers for the army of the Magnanimous Sultan; infanticide is resorted to among them for the relief of poor families; and, lastly, in the daily struggle against the usurer, the shopkeeper, and the jobber, who is nearly always a Greek, they are invariably vanquished. They are disappearing because of their superior qualities.

Moreover, they study their language very little; they are not strengthening it with songs and books; they are making no effort to rouse it from the sleep which it sleeps along with Arabic and Persian, the two idioms from which Turkish has borrowed so largely. On the other hand, their Greek neighbors have great pride in their Greek tongue, and are multiplying their schools even in the most insignificant hamlets. The Osmanlis are, therefore, disappearing from many a valley where in former times they were almost the sole inhabitants; their lands are falling into the

hands of Christians; their cities are degenerating into hamlets, their hamlets into ruined huts, and these huts are becoming only a name, which is itself being effaced.

It is principally in the anterior portion of the peninsula, along the Bakyr, the Ghediz, the Little and the Great Mæander, the Gerenis, and the Kodjai, that the Greeks are gaining rapidly on their old enemies, the Turks. They still number only 400,000 in something like $1\frac{1}{2}$ millions, 600,000 of whom are pure Turks, and 300,000 nomad Yuruks; but this ratio is changing incessantly in favor of the Greeks. We can safely predict that these streams will flow again through Hellenic territory, as in the days when they were called Kaikos, Hermos, Kaistros, Maiandros, Indos, and Xanthos. On these rivers, and in the islands of the coast and the rest of the Chersonesus, there are fully a million Hellenes; and it is possible that the future, which looks gloomy in Europe for these heirs of Agamemnon, reserves prosperity for them in Asia Minor. Fate may also smile at length on the 800,000 Armenians who till and traffic along the upper Euphrates, in the native land of the Araxes and around Lake Van; they are already masters of trade and finance here, and they are gaining a hold on the land by usurious loans.

South of Lake Van, the Kurds people lordly mountains which dominate the plateaus of Asia Minor and of Iran, and which look down from great heights on the Mesopotamia of the Euphrates and Tigris. Intrenched in their Alps, these hardy plunderers pay as little heed to Turkey as to Persia; they have always delighted in robbing the inhabitants of the two empires to which they are reputed to belong, namely, that of the sublime Sultan, on the north-west, and that of the sublime Shah, on the south-east. They are shepherds and husbandmen, as well as brigands; they practise a gross Sunnite Islamism,¹ and make use of a very harsh Iranian language. Their language is mixed, it is true, with Arabic and Syriac; but these two elements entered into it too late to affect it radically. The Kurdish idiom is Aryan by the same right that the Kurds themselves are Aryan; they intermarried from earliest times with Turks, Armenians, Arabs, and every race that ever lived or encamped in Iran and Asia Minor. These prolific mountaineers are continually descending from their cold hamlets to settle on the Iranian steppes, in Anatolia, on the middle course of the Kizil Irmak, in the Taurus ranges, in northern Syria, and in northern Mesopotamia; as they do not always retain their language, they are dwindling, to the advantage of the Osmanlis and Iranians. In all, there are fully 2 millions in Asia (500,000 of whom are in Persia), even not including the Luri, their brothers in speech, and the Bakhtiari, who are thought to be their brothers in race.

Grecian Islands.—The plateau is, then, shared by four peoples; but the islands are almost entirely Greek,—Mitylene, Scio, Samos, Rhodes, Cyprus, and numerous smaller ones, so charming in ancient times, when they gave to the enchanted world poets, artists, and savants, and at the same time glib talkers and swindlers.

Mitylene, or Metelin, the Midillu of the Turks, is the old *Lesbos*, famed for its voluptuousness,—but what Grecian island was not voluptuous? With an area of 600 square miles, and 45,000 inhabitants, it commands the Gulf of Smyrna, opposite the coast where Phocæa, the founder of Marseilles, and, farther inland, royal Pergamus, once flourished. Its Olympus rises to the height of 2753 feet.

Scio, the Turkish Saki Adasi, embraces 400 square miles; it contained 60,000 inhabitants before the earthquake which only recently (March, 1881) levelled its city and its villages. Five thousand Osmanlis contemplated here the toils and the busi-

¹ A third, at the very most, embrace Persian Shiism.

ness of 55,000 Greeks; and yet the Greek war for independence (1822) had not left a Hellenist in Scio, the Turk having either slaughtered or enslaved all the Christians on the island. On the bald rocks out of which Mount Saint Elias springs to an altitude of over 4200 feet are thriving vineyards, inundated with warmth and sunlight, and out of these vineyards flows a delicious Muscatel. The sea-going Sciots, who were formerly pirates, have a genius for trade. "It takes two Jews to make a Greek, and two Greeks to make a Sciot."

Samos lies 6500 feet from the shores where Ephesus once flourished. There are 5,000 inhabitants on its 180 square miles; these are grouped around Mount Kerkis (5740 feet), which carries the snows of early winter until spring. Officially, Samos ranks as a "tributary principality" of the Turkish Empire. It is a nursery of Greeks, and it has sent fully 15,000 Samiots to the seaboard of Asia Minor.

Rhodes, during the palmy days of Greece, retained the supremacy on the sea, or, rather, in the eastern Mediterranean, for several olympiads. In the Middle Ages, this island was famous for the warfare carried on by the Knights of Saint John of Jerusalem against the all-powerful Turks. The resistance, which was as destructive as the attack, held out for one hundred twelve years, down to 1552. These bloody times are recalled to-day by the escutcheons in the famous Rhodian Street of the Knights, which was the *place d'armes* of the iron-mail Christians. The island covers 450 square miles; its 29,000 inhabitants are always menaced with burial beneath their ruined dwellings, as in the earthquakes of 1851 and 1863. Mount Altaïro (4068 feet) has not the proud majesty of the Taurus of Lycia, which is visible across the waves from the capital, Rhodes, and from the ports of the eastern coast.

Cyprus probably never contained the 3 million inhabitants attributed to it under the Greeks. A fifteenth or sixteenth of that number now occupy the island. They are governed by the English,¹ who succeed here the Romans, the Byzantines, the French, the Templars, the Venetians, and the Turks. A recent census fixes the number of Cypriots at 209,000; the surface, embracing about 3700 square miles, is rocky, the soil is neglected, and the valleys are malarial. Mount Troödos rises 6590 feet, and is snow-capped even in summer.

Cyprus's benefactor is the sun, which ripens celebrated wines, such as the growth of the Commandery. The island lies under the 35th parallel, with long rainless seasons, and it is exposed at times to the desolating visitations of locusts. But forests might save the mountains and restore freshness to the valleys, especially to the parched plain of the Messaria. The principal stream of the Messaria, and the longest in Cyprus, the Pedia, passes the capital, Nicosia, or Lefkosia (pop. 11,500), and empties into the sea north of Famagosta; this river is more than 300 feet broad, but it is scant, and its sandy bed is often perfectly dry. The island is deficient in running water, but an impervious stratum underlying the porous rocks makes it rich in springs. The fountains of Kytheka and of Chytrea turn their valley into a paradise, with orange-trees, lemon-trees, and olive and mulberry orchards. According to popular belief, these waters come in submarine, syphon-shaped passages from the Asiatic mountains facing Cyprus; and the populace is possibly right in this case, although the sea is here more than 10,000 feet deep, and although Cilicia is more than 60 miles distant.

¹ Cyprus still forms a part of the Ottoman Empire, but in accordance with a treaty between England and the Porte, signed June 4, 1878, the government is administered by England for such time as Russia shall hold Batum and Kars. — Ed.

Cities. — Asia Minor has no capital, but is subject to the European city of Constantinople. However, the arm of the sea separating this metropolis from Asia is narrower than many a river, and Constantinople is Asiatic by its suburbs on the left shore of the Bosphorus, which are grouped under the name of Scutari, or Üsküdar. There are fully 30,000 inhabitants in this Anatolian Stamboul, from which the Roumelian Stamboul gleams like the city of wonders. The good Osmanlis of Constantinople like to choose their six feet of earth under the cypresses of Scutari's vast fields of the dead. Is it because of filial piety, is it reverence for the land of Asia, whence they came, and whither they are about to return after four hundred years of the fiercest and most fruitless wars of history?

About fifty or sixty miles south of Üsküdar is Brusa (pop. 35,000); this city viewed with pride her 365 mosques, when, in 1865, an earthquake suddenly overturned her houses of prayer and her shops, — for Brusa has her industries. Brusa lies at an altitude of 1000 feet, at the base of a granitic and gneissic mountain, the stately and regular, forest-clad, snow-capped Mount Olympus (8200 feet). It was the capital of the Turks until 1361 (when Murad I. made Adrianople his residence); and as long as it remained the metropolis of the Osmanlis, who were then in all the glory of their youth, its inhabitants filled it with palaces and mosques; it received poets, legists, savants, professors, and "men of the Book" (or expounders of the Koran); it witnessed the birth of Turkish literature and the development of the Turkish idiom by large Arabic and Persian contributions.

Smyrna, the Ismir of the Turks, five times the size of Brusa, has 200,000 inhabitants; 130,000 of these are Greeks, and 45,000 Turks; there are also many cosmopolites, to whom the prevalence of the French tongue here is traceable. Owing to its large population, and its commerce, which makes it the chief centre of exchange between Europe and the Levant, Smyrna will long remain the most important city on the coast of Asia Minor. The Gulf of Smyrna sets for a long distance inland, north of the shore over which Ephesus once ruled, and where Miletus, the mother of nearly eighty Greek colonies, once trafficked; and it lies far to the south of the seaboard where Kas Dag (5748 feet), formerly Mount Ida, looks out over the fields of Troy.

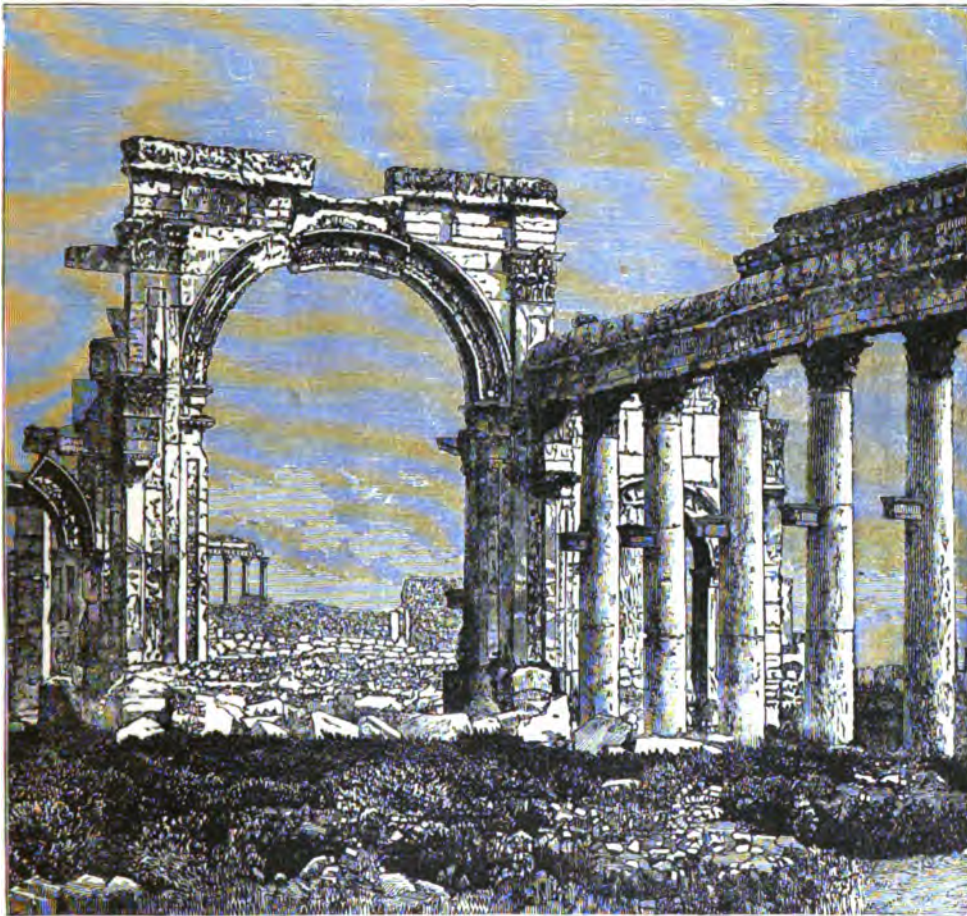
These three cities are on or near the coast. Then follow: Kaisariyeh, a town of 60,000 souls, at an elevation of 3586 feet, at the foot of Mount Argæus, not far from a short affluent of the Kizil Irmak; Ancyra, to-day Angora (pop. 30,000), about 3550 feet above sea-level, celebrated for its long-haired animals; Erzerum (pop. 60,000), the Garem of the Armenians, situated near the Western Euphrates (one of the parent branches of the stream), at an altitude of 6430 feet. The temperature of Erzerum ranges between -13° and $+111.2^{\circ}$ F.

Mesopotamia. — On quitting the plateau of Asia Minor, the Euphrates enters a broad expanse of low country, called Mesopotamia. This was once a proud and glorious land of magnificent palaces, colossal statues, gigantic brick fortresses, and countless canals. Here flourished the famous cities of Asshur, Nimrud, Nineveh, Babylon, Seleucia, Ctesiphon, and later the Baghdad of Haroun al-Raschid and the great Caliphs. To-day nothing of all this splendor remains but ruins, and ruins of ruins, hieroglyphics on brick, tracts of sand, and soil that is doomed wherever the canals have ceased to flow, and swampy wherever they have burst.

This region is sharply defined: on the north are the Anti-Taurus and Anti-Caucasus ranges; on the east rise the Alps of Kurdistan, which the Greeks called the

Snowy Mountains. On the west, the incandescent sands and rocky plateaus encounter the djebels of Syria; on the south, the sands blend with those of Arabia; on the south-east, the delta of the Shatt-el-Arab terminates on the Persian Gulf. Cut off in great measure from the north, west, and east winds, Mesopotamia lies exposed to the sun of the south.

The Euphrates and Tigris. — The Shatt-el-Arab. — The Euphrates issues from a very cold spring, often mentioned in the Armenian legends, situated in the porphyritic and



THE RUINS OF PALMYRA.

trachytic rocks of Dumli Dag, at an elevation of 8432 feet. It winds across the plateau of Erzerum (an old lake-bed), under the Turkish name of Kara Su (Black Water), and under that of Furat;¹ then it roars through gorges of almost peerless grandeur, near the town of Egin. It flows in this way toward another Euphrates, the Murad, a longer and more abundant stream than itself, which rises near Bayazid in a chain 11,542 feet high, and which passes to the northward of Lake Van.

¹ Whence our name of Euphrates.

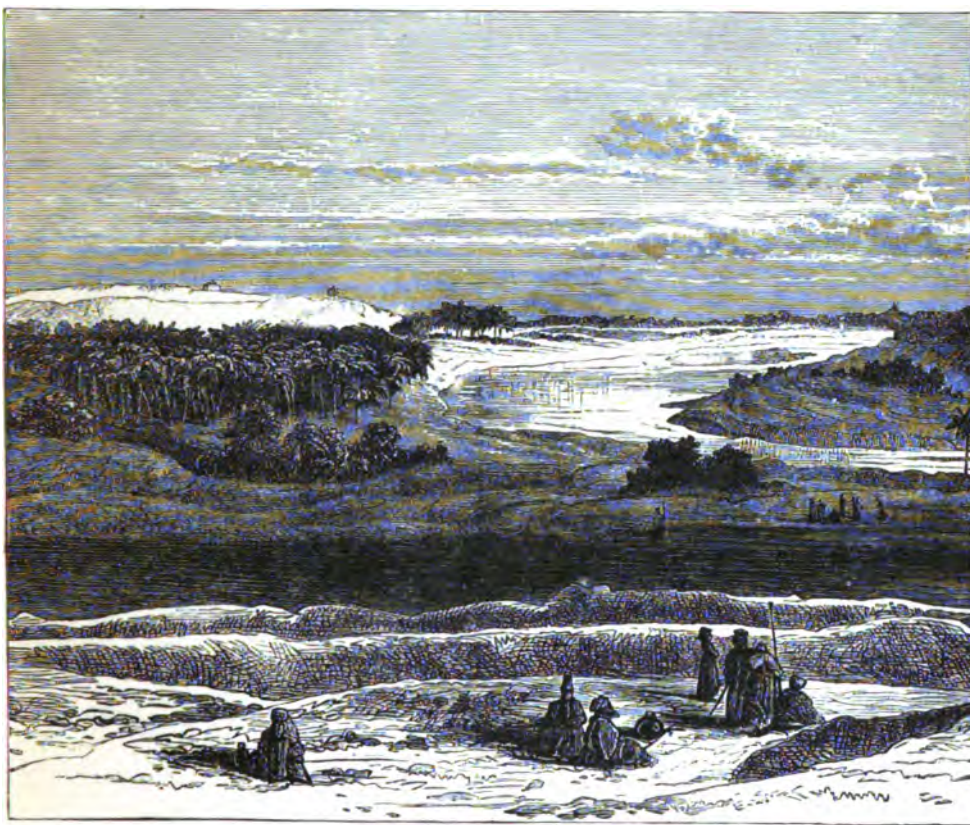
Beyond the confluence of the two branches, the river pierces the Taurus by defiles more than 90 miles in length and 1800 feet deep; with a breadth varying, according to the passes, from several hundred yards to a hundred feet, it descends into the Mesopotamian plain by three hundred rapids and falls; the Arabs call this plain El-Djezireh, "the island" (between the Euphrates and Tigris), and the old Chaldeans named it, still more appropriately, Aram Naharayim, or the Syria of the Two Streams. Escaped from its prison, the Euphrates follows a slope which would carry it to the Mediterranean past Aleppo; at Bireh-Jik it is only 95 miles away from this sea, but the right bank skirts sands which refuse to yield, and it decides to turn toward the south-east. To the north-east stretches a region of wonderful fertility, and on the south-west lies a vast waste; in one of the oases of this Sahara of anterior Asia, some of the columns of Palmyra's ancient temples and palaces still rise out of the imposing desert. The stream moves, sometimes sluggishly, sometimes in rapids, between lines of palms, around islets, and under a luminous sky; it is continually diminished by the gigantic *norias*, or wheels with troughs, which draw up its waters, and by the canals which drain it. The Hindiyah, one of these canals, takes almost a half of its flow for the Nedjef, a brackish swamp-lake, 60 miles long and from 12 to 20 broad. This Nedjef does not restore to the Euphrates all the water drawn from it, for a good part reaches the Persian Gulf independently of the Shatt-el-Arab. And, along both banks, extensive swamps drain the river of Babylon. This is the chief cause of the inferiority of the Euphrates when it encounters the Tigris.

The name of the swift Tigris is perhaps derived from an old Persian word, signifying arrow. At the point where this river rises, the low mountain is 1300 feet above a twisted pass in which a stream that has already flowed 300 to 375 miles hoarsely rumbles, as though strangled in the abyss; this latter stream, the Euphrates itself, is inferior in flow to the Tigris, notwithstanding its greater length; it carries less than half the volume of the twin currents, if it is indeed true that the Euphrates arrives at the Koma rendezvous with only 72,917 (?) cubic feet per second, while the Tigris brings 164,407 (?). In any event, at their confluence the Euphrates is only 410 feet broad, while the deeper Tigris tosses its yellow floods between banks at least 650 feet apart.

The Tigris has two parent branches, namely, the Didjleh, or West Tigris, and the Bohtan, or East Tigris; the latter is the smaller of the two. Scarcely have they united when the already powerful stream buries itself in long gorges, between lime-stones and basalts; it bathes Diarbekr, then Mosul, and receives on its left bank the strong torrents from the Kurdish mountains,—those generous purveyors of snow, towering 13,000 to 15,000 feet, between Iran and Mesopotamia; in this way it absorbs the Great Zab (which witnessed the battle of Arbela), the Little Zab, and the Djala. The important town on the banks of the Tigris is Baghdad. Khorsabad, Koiundjuk, and Nimrud are ruins of dead cities. On the Euphrates, near Hillah, the remains of Babylon are crumbling; these are of brick, for the "Gate of God," Bab-ili, was built in an alluvial district, where stone was scarce. This brick city was destined for a briefer existence than Nineveh and her Assyrian sisters. To-day Babylon is nothing but a heap of rubbish, while Kerbela, not far away, is still a flourishing town. Kerbela is the sacred city of the Shiite Mussulmans; it is visited annually by fully 120,000 pilgrims, who pride themselves on having traversed vast plateaus, Alps, countless torrents, two rivers, and burning plains, in order to mutter a prayer before the tomb of Hosein, son of Ali and grandson of Mahomet. Such is the sanctity of

the ground where the martyr Hosein bled that all Shiites, even those on the distant confines of India, cherish the hope of confiding their ashes to it; caravans, emitting fetid odors, and sometimes sowing the plague along their route, transport dead bodies to Kerbela, or the disinterred bones of those who, when dying, expressed a wish to repose near Hosein.

When the rivers meet after having communicated by cross branches, first from the Euphrates to the Tigris, then from the Tigris to the Euphrates, they are quite

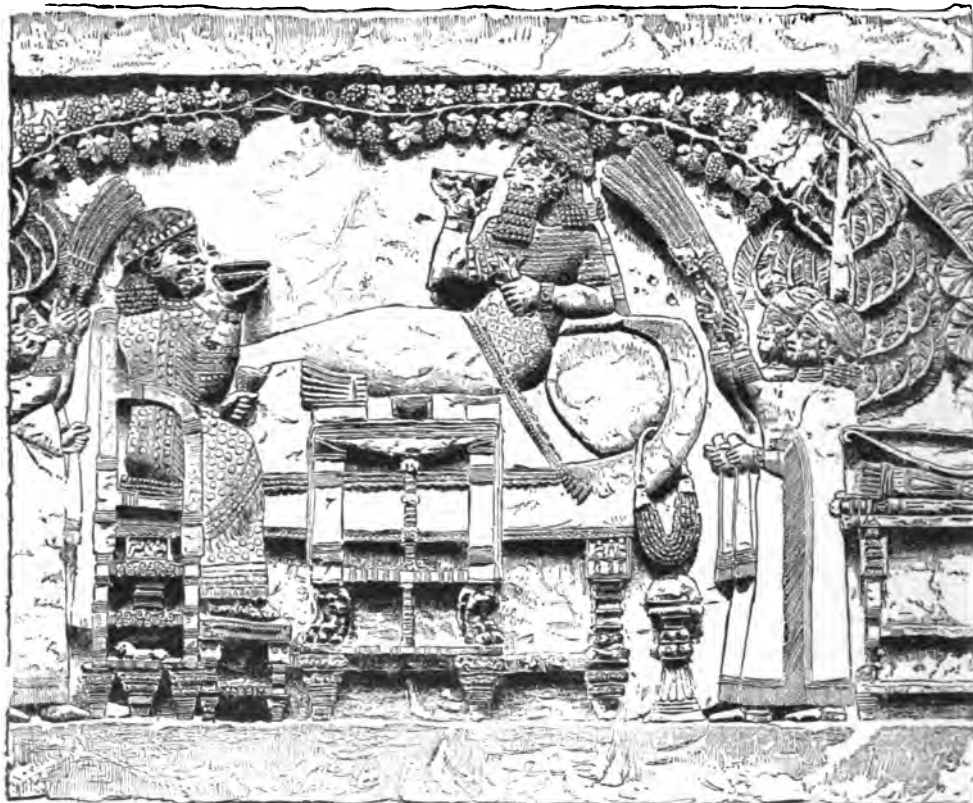


THE SITE OF BABYLON.

dissimilar; the Euphrates has been clarified in the marshes, and is less turbid and lazier than the Tigris. At some period in the remote past they flowed by two different routes to their common sepulchre. They reach it together now through the Shatt-el-Arab, which has a mean volume of 236,441 (?) cubic feet per second, with a breadth of 1640 feet, and a depth of 20 to 30.

The Shatt-el-Arab passes a league away from the decayed city of Bassorah, and terminates, by a delta, in the Persian Gulf, after having skirted on its right or Turkish bank (the left bank is Persian) one of the most vast palm-forests in the world. These lithe trees, numbering tens of millions, front the river for 30 or 40 miles, running back to a distance of 3 to 6. The stream rolls an enormous amount of débris. It has already filled up large sections of the Persian Gulf, thus connecting four once inde-

pendent currents, namely, the Tigris, the Euphrates, the Kerkha, and the Kharun; the mire and reeds have encroached nearly 95 miles on the sea in three thousand years,—or an annual mean of something over 160 feet. The Kerkha and Kharun descend from the mountains of Luristan and Khuzistan, which unite the Alps of Kurdistan with the mountains of Farsistan, or Persia proper, and separate the basin of the Euphrates from the plateau of Iran. These are noble rivers. The Kharun has no communication with the Shatt-el-Arab, except at Mohammerah, where it discharges a small



ASSYRIAN SCULPTURE. — AN ENTERTAINMENT.

portion of its floods into the stream through a canal, and then empties into the Persian Gulf by a separate mouth.

From the source of the Euphrates to the terminus of the Shatt-el-Arab, including the curves, the distance is about 1550 miles.

Peoples and Cities.—The old, powerful nations of Mesopotamia were largely of Semitic speech. They were becoming Hellenized when the course of the world's history suddenly changed. After the decline of the Greeks, the plain was invaded by Roman armies. Then came the Parthians, Persians, Arabs, Mongols, and Turks, all peoples of little clemency, who, entering forcibly or otherwise into the families, sullied the purity of the springs of the Chaldean blood. Among the lofty mountains of Kurdistan, much still remains of the Assyrian stock; in the plains, the Arab race

clearly predominates, by the side of the Persian and the Turkish. In certain villages near Harran, the ancient Syriac is still spoken; this idiom is also used, though without being understood, by 140,000 Nestorians, in their religious rites. In the vicinity of Mosul, near the Tigris, dwells a Kurdish tribe, the Yezidis, who worship the devil. "Why implore the good God?" they say. "The being to be placated is the Evil Spirit, Satan!" Their holy city, the home of their prophet and the resort of their pilgrims, is called Lalekh. They number 50,000, at the most, and they are widely scattered.

There are less than 2½ million inhabitants in the basin of the Euphrates and Tigris, not including the Armenian plateau and the mountains of Kurdistan; in the plain, nearly all the population speaks Arabic, and Kurdish is the prevailing language in the uplands.

The most important city in the basin, Baghdad, lies on the Tigris, near the sites of Seleucia and Ctesiphon, which faced each other from opposite banks of the river. Seleucia preceded Antioch as the residence of the sumptuous kings of Syria who ruled, nominally or in fact, from the Bosphorus to the Indus; Ctesiphon was the capital of the Parthians. For five hundred years Baghdad was the seat of the Caliphs, the capital of the Arab empire, the queen of letters and of arts, and it was the scene of the marvellous tales of the "Thousand and One Nights." Did it ever number, as we are told, 2 million souls? It contains at present 180,000 inhabitants. These are Arabians, Iranians, and Hebrews, who carry on trade with Turkey, Arabia, Persia, Turkestan, and India. The city is called officially the House of Peace, Dar es-Salam.

Mosul (pop. 45,000) is on the Tigris, very near the plateau where ancient Nineveh stood; it is 18 miles south-west of Khorsabad, and 20 miles north of Nimrud, which, under the name of Calah, was the ante-Ninevite capital of the Assyrian Empire.

Diarbekr (pop. 40,000) is likewise situated on the Tigris, at an altitude of 2250 feet, in a Turkish-speaking district, but within reach of the Armenians, Kurds, and Arabs.

Syria: Lebanon, Antilibanus.—The two famous ranges of Lebanon and Antilibanus traverse Syria, from north to south, between the Mediterranean and the Palmyra desert. They are separated by a deep depression, named by the ancients *Coele-Syria*, or Hollow Syria, and called by the Syrians of to-day El-Buka'a, or the Vale of the Mulberry-trees; this valley is on the average 3300 feet above the seas, and stretches between mountains 6000, 8000, and 10,000 feet or more in altitude.

The name Lebanon seems to be derived from the Hebrew root *laban*, "to be white like milk"; it doubtless has reference to the frosty covering of the mountain-peaks. These snows, however, are not persistent, for the culminating summit, Timarun (10,531 feet), loses its winter mantle in summer. The magnificent cedar forest of Lebanon, situated at an elevation of 7280 feet, and once the most celebrated of the lofty groves of the Orient, contains at present hardly more than 400 trees; and it is with difficulty that these are protected. They are gnarly, twisted, and broken with age. The range, composed partly of sandstone and basalt, but chiefly of limestone and chalk, follows the Mediterranean, sometimes very near the shore, and sometimes 15, 20, or 25 miles away; it sends down to the sea a multitude of torrents, the cataracts of which are silent during portions of almost every year. A few small crocodiles are found at the bottom of two of these streams (*nahr*). Near the coast

are splendid springs, which formerly supplied the great Phœnician cities with water; to-day, they furnish drink for the flocks, and are utilized to irrigate oases and drive mills. Fountains are not rare, either, in the lofty mountains: the Nahr Ibrahim, the ancient *Adonis*, the Nahr el-Kelb, once called the *Lycus*, and the Nahr Kasimiyeh, the old *Leontes*, all spring from rocks in the mountains.

The limestone chain of Antilibanus borders a sea of sand, as Lebanon skirts a watery sea; its Mount Hermon, one of the least bare of the Syrian djebels, reaches an altitude of 9275 feet. It is this bold and jagged chain that sends such pure waters to Damascus; it is here, likewise, that the rains and snows are unceasingly filtered which form the sparkling floods of the head-fountains of the Jordan. Antilibanus



THE CEDARS OF LEBANON.

marks majestically the northern limit of the Holy Land, which extends southward as far as the Dead Sea. South of the latter, on Egyptian territory, but in a peninsula linked to Judea by the memories of a common history, the beautiful granitic Sinai mass rises in grandiose peaks, — seven-pointed Serbal, Mount of Moses, Mount Horeb, and Mount Saint Catharine (7382 to 8527 feet); — at its base, waterless ravines open on the desert or the two gulfs.

The Jordan, the Dead Sea. — The principal Syrian stream is the Orontes; the great river of Palestine is the Jordan.

The slender Orontes sets back in lakes which are, at the very best, fatal marshes; it passes the melancholy ruins of Antioch, and separates the Anti-Taurus range from

Lebanon, or, rather, from the chalk rocks of the mountains of the Nusairieh, which prolong Lebanon on the north. Antioch (pop. 22,000) was once the third city of the world ; in its palmy days, it bowed to none but Rome and Alexandria.

The Jordan, scarcely 100 miles long, flows through a chasm-like valley, which terminates in the lowest known depression of the globe. Its mother source, which is very powerful, escapes from the basalt at Tell el-Kady, at the foot of a tall ash and a giant beech, at an elevation of 541 feet. This is the fountain of Dan, the city familiar as the northern landmark of the Jewish country. The second source, the fountain of Baniyas, not more than half the size of the first, issues from limestone ; and the Hasbany, a long stream, rolling turbid waters when it encounters the Jordan, is only a third as strong. In Hebrew, *yarden* signifies " which descends " ; and the Jordan does, in fact, run swiftly. At its first lake, Huleh, which is preceded by a papyrus



PAPYRUS, LAKE OF TIBERIAS.

swamp, it is already not over 6 or 7 feet above the seas. This lake, called in the Bible the Waters of Merom, is 3 or 4 miles long by as many broad during the dry season. The second sheet through which the Jordan flows has an area of 70 square miles ; it has borne various names, — Lake of Tiberias, Gennesareth, Sea of Galilee, and Sea of Chinnereth. To-day it is the Bahr Tabariyeh of the Arabs ; it lies 682 feet below the Mediterranean, with an extreme depth of 820 feet. The occurrence of regular strata of gravel above the surface of its waters leads to the belief that this somewhat brackish diminutive Mediterranean was once much more vast, and, perhaps, communicated with the great Mediterranean through the plain of Esdraelon ; the latter is a rich alluvial tract through which the Kishon meanders before emptying into the sea at the foot of the bold promontories of Carmel.

The Jordan issues from Bahr Tabariyeh with a breadth of 80 to 100 feet ; then it winds between jungles of reeds and tamarisk at the bottom of the Ghor, a sunken,

uninhabited valley with steep sides, which defies the winds and concentrates all the rays of the Syrian sun. This valley forms a small tropical zone in the bosom of the temperate; it contains plants, animals, and birds common in torrid Africa. The Jordan is fed from powerful fountains, and its mean flow, variously estimated at 1060 to 2436 cubic feet per second, is swollen by regular floods. It might, then, irrigate the Ghor, and make it one long garden; but the Jews do not know how, or do not care, to distribute it by canals, and the fellaheen are either too ignorant or too hampered to do it. On the west, the Jordan skirts the mountains of Israel, from which short streams reach it. On the east stretches Transjordan, traversed by long torrents, the scant waters of which are derived from storms rather than from springs; they are exceedingly weak in dry weather, and often do not run at all. The strongest of these, the ancient *Hieromax*, descends from Djebel Hauran (6079 feet), a group of extinct volcanoes prolonged by the craters of the Safa.

The Jordan empties into the Dead Sea, which, though steadily dwindling, still covers 358 square miles; it is separated from the Red Sea by a sill 115 miles long. This Bahr Lut (Sea of Lot) of the Arabs continues the valley of the Jordan in a direct line from north to south for 46 miles, with a width of 5 to 9. Its heavy waters lie 610 feet below the Tabariyeh, and consequently 1292 below the Mediterranean. On the west, the ragged rim of chalky and limestone Judea, along which climbs the pathway leading to Jerusalem, robs the shore of the last rays of the afternoon sun. These highlands are white, while the Mountains of Moab, lifting their placid profiles on the east, are blackish or blood-red; they are composed of basalts and porphyries disposed in long, stately lines. One of the Moabite summits, — not a bold one, for the chain has no towering peaks, — Nebo, faces the luminous country which must have seemed empty as well as grand to Moses, when from its top he gazed for the first and last time on the horizons of the Promised Land.

The Dead Sea contains depressions of 984 to 1309 feet in the northern basin, with a mean of 1083, which is about the maximum depth of the Lake of Geneva; but in the southern bay hardly 8, 10, or 12 feet of water cover the bed. Nine terraces, running entirely around the sea at varying altitudes, show by the presence of marine shells that they were once shores, at ancient levels; the highest of these has an elevation corresponding to the surface of the oceans, and we may therefore conclude that there was a time when the Sea of Tiberias, the valley of the Jordan, the plain of Esdraelon, and the Dead Sea formed a single vast Mediterranean gulf.

The waters of the Dead Sea are charged with salt almost to saturation, and with substances destructive to life, among others bitumen: hence the name of Asphaltic Lake, which is often applied to it. There is no vegetation on its banks, and not a fish can live in its floods. Torrent beds, waterless ravines, and rocky stairways descend to the Dead Sea down the steep declivities of the jagged mountain-chains of Judea and Moab. Under the burning sun, along these stone trails, and at the root of these thirsty djebels, the shores of the lake horrify one by their fulvid aridity; but the smallest fountain will start an oasis here. In the old kingdom of Judea, which once "flowed with milk and honey," there are many gorges where the rose of Sharon and the lily of the valley have ceased to bloom, and which are as dry as the very shores of the Accursed Sea; on the carcasses of the rocks, likewise, there is little soil in which grain, figs, olives, and the vine can be grown. The uplands of the kingdom of Israel have better preserved their ancient reputation for abundance. As for Syria, it still has its fountains and its streams from Lebanon, of which King Solomon sang.

Peoples and Cities. — Syria was anciently inhabited by tribes of Semitic origin, or, at least, of Semitic speech. At the beginning of the Christian era it was in the way of becoming Hellenized. But the country has been so often invaded since then that divers religions have been thrown into it, and the races have been greatly mixed; Arabic is, however, the only language spoken, outside of a few small towns where a Syriac dialect is in use. The Mohammedans predominate in the lowlands. In northern Lebanon, chiefly on the western slope, dwell 200,000 Maronites, who are of French

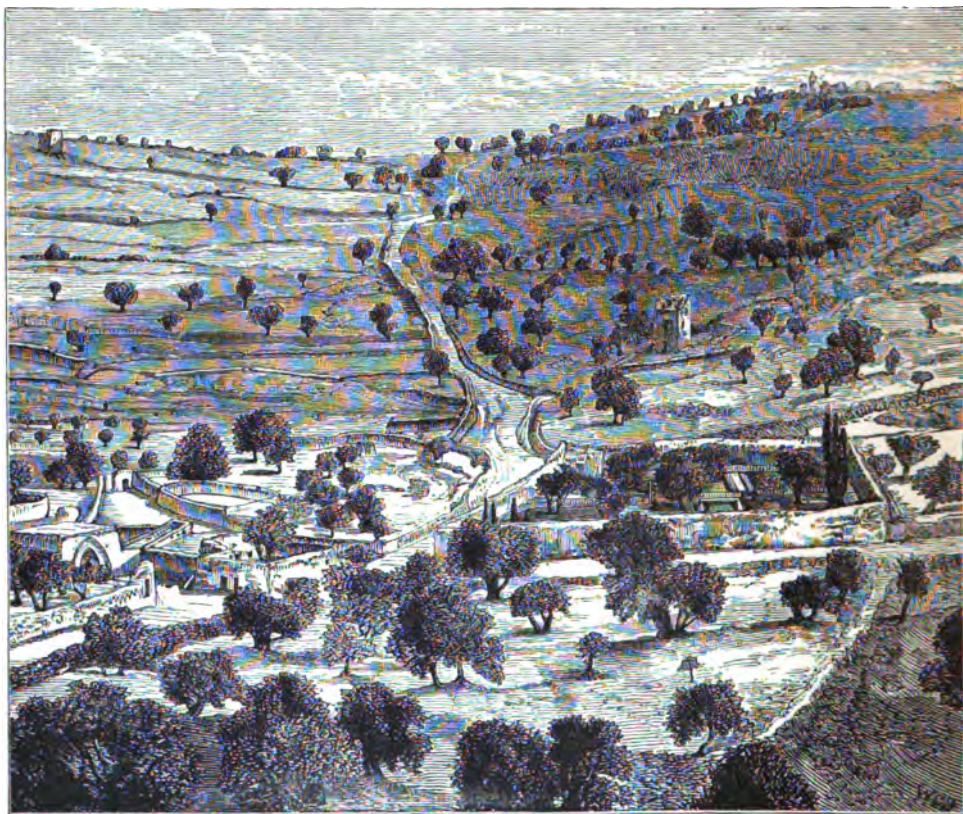


CHURCH OF THE HOLY SEPULCHRE, JERUSALEM.

speech, but who mumble their services in a language totally incomprehensible to them. These mountaineers have converted their rocks into gardens. The 120,000 Druses people southern Lebanon, and they are pushing their way over the semi-desert of the Hauran Mountains; like the Maronites, whom they slaughter whenever opportunity is offered, they probably descend from the ancient Syrians; they are distinguishable from the other inhabitants of Lebanon by their greater angularity of body, and they are more generally blue-eyed, with fair or red hair. They are neither Mussulmans nor Christians, but constitute a separate people, wholly intolerant of all religions ex-

cept their own. They do not marry outside of their own ranks, and they make no proselytes to their beliefs, which they hold from a special prophet.

Who would think that this country, where there are so few Christians, so few Europeans, and so few men not of Arabic speech, was, perhaps, the one which cost Europe the most Christian blood, the one which she most ardently desired to possess, the one into which she threw the most armies, and the one where she exhausted the most enthusiasm and faith? The conquest of America robbed her of fewer seamen, leaders, adventurers, and apostles barbed with steel. Of the gigantic undertaking of the Crusades no evidences are visible on the Syrian soil except a few feudal eyries;



MOUNT OF OLIVES.

there are no legitimate heirs of the noble families that built their donjons here, and no cities peopled with the posterity of those Puglians who came here with their families, and who constituted the only "colonizers" of the Holy Land.

It is thought that there were once 10 million inhabitants on the 100,000 to 115,000 square miles embraced in Syria, Palestine, and the country beyond Jordan. The present population of this entire region probably does not exceed $1\frac{1}{2}$ millions: it includes, in the extreme north of Lebanon, some Mussulmans in the towns, with more or less Christianized inhabitants in the country districts, as well as a few Sabian star-worshippers; also, Maronites, Christians, Syriacs, Druses, Jews, Armenians, Shiite Meta-

wile, trans-Jordan Beduins, Kufar or cis-Jordan peasants, etc. The majority profess Sunnite Islamism. A million and a half inhabitants make a small population for a country possessing a fine climate and a soil which is, on the whole, excellent.

Aleppo (pop. 120,000), the Haleb es-Shabba (Aleppo the Spotted) of the Arabs, is the capital of Syria, midway between the Mediterranean and the Euphrates, on the shortest route between the two; its population has shrunk considerably since the earthquake of 1822. It is a charming town, 1142 feet above the sea, — embosomed in groves, on the canals of the Kowek.

Damascus (pop. 200,000) is situated at an altitude of 2460 feet, at the eastern base of the Antilibanus, not far from the desert, on the cold, gray, swift Barada. This city no longer manufactures the steel blades for which it was once famous, and the Caliphs or chiefs of the Arabic empire no longer reside there; but it has preserved its gardens and its cool waters of Abana and Pharpar.

Beyrout (pop. 80,000), in a beautiful coast region, 90 miles from Damascus, of which it is the port, recalls but very feebly the former wealth of Sidon (to-day Saida) and of Tyre (to-day Sour), its neighbors on the south.

Jerusalem (pop. 28,000), the El-Kuds of the Mussulmans, lies under burning skies, 30 miles in a direct line from the Mediterranean, and 15 from the Dead Sea, 2559 feet above the first, and 3845 above the second. The city of David languishes on limestone hills, the names of which will never be effaced from the memory of man. Sion, on which the Temple stood, was the holy hill of the Israelites; and Calvary is sacred to every Christian. In an arid gorge, between the plateau on which the city is built and the Mount of Olives, is the bed of the Kedron, whose pebbles are sometimes wet by a sudden storm, on its route to the Dead Sea.

In beauty of situation, in the freshness of its fountains and running streams, and in the magnificence of its gardens, Napolose, at an altitude of 1870 feet, is a little Damascus. This city, situated on the water-shed between the Jordan and the Mediterranean, was formerly called Shechem; not far away was Samaria, the capital of the kingdom of Israel, and the rival of Jerusalem itself.

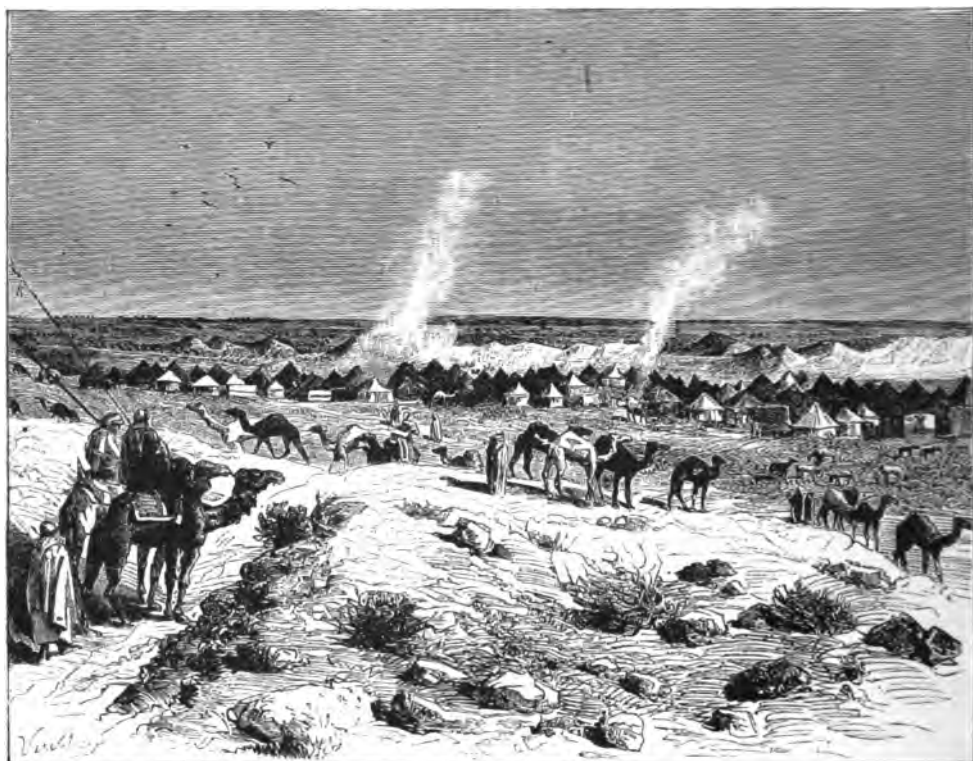
ARABIA.

The Red Sea. — The Persian Gulf. — Very ancient tribes of Semites gave the appellation of Arabah to the rocky region south of Tadmor (Palmyra) between the palm-trees of the Euphrates and the black lava of Djebel Hauran. The name was afterward extended southward, and applied to the entire peninsula, or to the entire island (El-Djézireh), as the Arabs say. The total area of Arabia is fully 1,216,000 square miles, if we include the region which Turkey claims to have subjected. — Egypt likewise possesses a portion of the peninsula, around Sinai.

The country has no definite limits on the north, where it blends into the Syrian desert; everywhere else it is washed by the salt waves: on the west, the Red Sea, on the south and south-east, the Indian Ocean; on the east, the Persian Gulf.

The Red Sea separates Arabia from Africa. It is only 125 or 150 miles broad, but it reaches a depth of 7451 feet, and it is 1370 miles long from the head of the Gulf of

Suez to the Strait of Bab-el-Mandeb, which connects it with the Gulf of Aden; the Gulf of Aden opens into the Indian Ocean; at this point is a little volcanic island, called Perim, from which England keeps watch over the maritime highway between the Occident and the Orient. This Red Sea is a clear and beautiful mirror, so transparent that at a depth of 60, 80, or 90 feet one can see, in an enchanting half-light, green algæ, meadows of marine grass, and forests of coral. But it is mainly remarkable as a long caldron, stretching between the reflecting mountains of Asia and of Africa, which are as noble of form and brilliant in color as they are terribly arid and naked. It receives the tribute of a few springs, some of which are submarine, but



A CAMP OF PILGRIMS.

not a single river and not a perennial torrent flows into it. The evaporation of its waters, which are the hottest in the world,¹ is so great that it would dry up in a few hundred years if it were not for the constant influx from the Indian Ocean. But for the Strait of Bab-el-Mandeb it would become, in the rainy seasons (which are exceedingly rare in this climate), a *shott* or *sebkha*, that is, a swamp-lagoon; and in summer it would be a vast tract of salt. Sand-banks and shallows abound here, and groves of red coral (but it is not from these that the sea derives its name, which is of unknown origin). Navigation is, therefore, extremely difficult for sailing vessels; however, since the piercing of the Isthmus of Suez, the Red Sea is alive with processions of steamboats, for it has become a highway for the nations.

¹ Reaching 89.6° F.

The Persian Gulf opens into the Gulf of Oman, by the Straits of Ormuz. It lies between dunes and cliffs, at the foot of jagged, burnt mountains, some bearing the Arabian plateau, others the Iranian. It is obstructed by sand-banks like the sea of Suez, and it is as formidably heated by the sun; but, unlike the Red Sea, it receives one of the mightiest streams of the planet, the Shatt-el-Arab, which is capable of transforming it, with the aid of the ages, into a marsh and then into a plain of unparalleled fertility; the Persian Gulf, which abounds in fish, embraces not more than 95,750 square miles, with a depth of 130 to 260 feet. Here and there, especially in the neighborhood of Bahrein Island, the pearl-oyster lives his "contemplative" life, clinging to the bed-rocks. Fully 25,000 divers are engaged in the pearl-fisheries of this gulf, aided by 25,000 cord-watchers. It is a terrible trade. Pearl by pearl these men fish up necklaces and crowns, and they perish for the vanity of our women and the brilliancy of our fêtes.

The Dahna and the Nefuds. — Nedjed and Tehamah. — Along these two gulfs and the ocean rise the rigid and calcined mountains which support the plateaus of interior Arabia. Almost everywhere they are near the shore. Along the three seas at their bases stretch three hot, unhealthful coasts, — a succession of dunes, of lowlands, and of short channels, which are destitute of water except during the rains, and rains are not frequent in Arabia. In ordinary years, the heavens are brazen for eight or nine months, especially in the centre and north of the peninsula, and then follows a season of light storms. It sometimes happens that a whole year passes without a single shower, and in certain doomed districts sometimes two or three years. The temperature has been known to reach 129° F. in the shade at Mokha, and more than once sailors have died of sunstroke at Aden by simply landing and crossing a street.

A large number of the Arabian mountains were formed by the fusion and ejection of the interior rocks, but all these volcanoes are now extinct. The loftiest summits along the outer rim of Arabia — they are as yet but little known, and have not been measured — seem to be those which rise on the extreme east, in Oman, where Djebel Akhdar perhaps reaches 9900 feet; Tsahura, back of Hadramaut, may have an elevation of 7875 feet; and many of the peaks in Yemen are estimated at 8000, 9000, or 10,000 feet. As for the *massifs* in the central districts, we are still more ignorant of these than of the coastal chains.

Djebel Akhdar, and the summits of Hadramaut and of Yemen, those places which by their altitude are coolest, overlook the hottest and most vast waste of all Arabia, the stony, sandy Dahna or "Crimson," or the Roba el-Khaliyeh. The Arab himself, inured as he is to the heat of the sun and to fiery winds, would hardly dare brave this fountainless immensity, if it were not for the camel, which can make 100 miles in a day, over the burning sand and under a blazing sky. From this major desert a narrow strip runs off, called the Little Nefud, which girdles Nedjed, or the plateau of central Arabia, and joins another Dahna, north of Mount Shomer; this latter Dahna, called the Dahna of the north-west, or Lesser Dahna, is more generally known under the name of Great Nefud. On the north, beyond the oval depression of Jowf, begins the stony plateau, a *hammadu* stretching between the Euphrates and the Dead Sea. The red sands of the two Nefuds, which are very deep in places, and doubtless also those of the major Dahna, are not aligned, as was once thought, in parallel waves, but they are rather dispersed in irregular masses full of *fuldj*, or horse-shoe-shaped hollows sunk 15, 30, 60, or even 200 feet. The lightest shower

will cover these sands with grass and shrubs, for they are not cursed with the eternal sterility of the gravelly soil of the hammada, and they would even be generous if the sky was less miserly. If we dared compare this locust-infested land, where there is so little creative power, with Andean America, which is fruitfulness itself, we should say that Nedjed is the *tierra templada* of Arabia, while the low, burning, suffocating Tehamah, on the coast of the three seas, represents here the *tierra caliente*; as for a *tierra fria*, the peninsula has none, owing to a lack of mountains of sufficient elevation to support broad plains at an altitude of 10,000, 13,000, and 16,000 feet. Nedjed is a plateau of pasture-lands dotted with limestone sierras, some of which may attain a height of 10,000 feet. It is, nevertheless, as the ancients said of Yemen, an *Arabia Felix*, with springs and running waters; the mornings and evenings are cool, or even cold, and at rare intervals a few flakes of snow fall. And, again, to use the ancient phraseology, if Nedjed, Yemen, and a few small districts here and there which are less dry and desolate than the others, constitute *Arabia Felix*, the Dahna and the Nefuds are *Arabia Deserta*, and the northern hammada is *Arabia Petraea*.

The Arabs. — The Universality of their Language. — Arabia has given a very vigorous people to the world; the Arabs are lean, bronzed, supple, graceful, and handsome. The race has not, however, retained its purity nor its unity anywhere except in a few secluded regions of Yemen and Hadramaut; everywhere else it has been mixed with Hindu, Iranian, and especially with African blood.

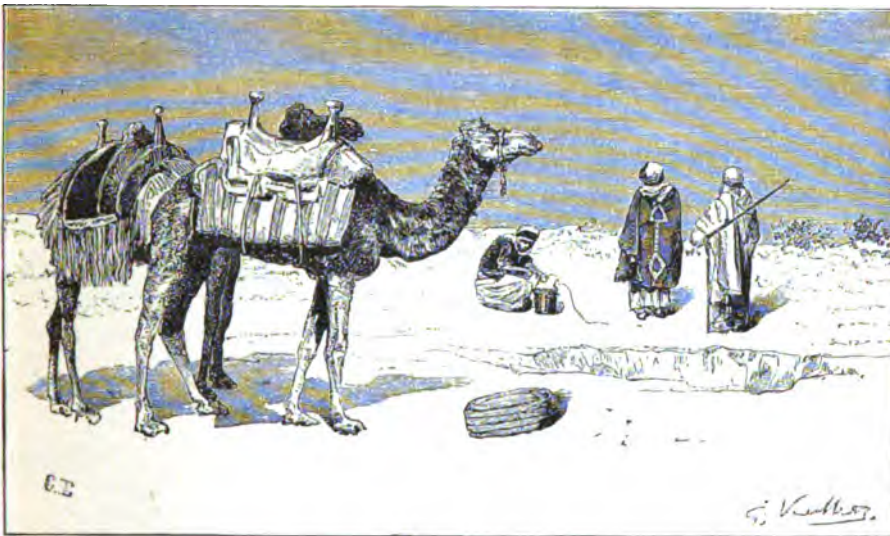
At the beginning of the seventh century, the different Arabian tribes were worshippers of the stars and of the hidden forces of nature, or they made profession of Judaism. In the year 622 appeared the prophet Mahomet ("the praised"), under whose teachings the Arabians were converted to a belief in the One God; after Mahomet's death, Arabia sent forth armies that attacked and conquered nearly half of the then known world. The success of her soldiers was due not to their numbers, but to their unity of purpose and to their enthusiasm, in which was concentrated and intensified every motive of action. Their battle-cry was their declaration of faith, "There is no Allah but Allah, and Mahomet is his prophet!" The empire, which was conquered in a century, "in the name of the Clement and the Pitiful," extended from the Indus to Coimbra, from the Roof of the World to the central Sahara, and from the Caucasus to Abyssinia. But the Arab world embraced too many peoples, too many languages, and too many climates, and before long it was rent in every quarter. In the middle of the eleventh century, all the genuinely Arabic territory was comprised in Arabia, Syria, Egypt, and, up to a certain point, Spain, which was, however, Berber rather than Arabic: it was at that period that the 250,000 Hilalian plunderers from the Nile region swept like a torrent over the Moghreb, from the Gulf of Sidra to the Atlantic, and almost transformed Barbary into an Arabic land.

Arabic is the national tongue to-day in Arabia, on the Euphrates and the lower Tigris, in Syria and in Egypt. It is spoken concurrently with Berber and French throughout the Moghreb, that is, in Tripoli, Tunis, Algeria, and Morocco; and an Arabic dialect is in use in Malta. In the western Sahara it shares the oases with the Berber tongue as far south as the Senegal and east to Timbuktu; it has made and is still making some progress in Soudan, through the slave trade, commerce, and, more notably still, through proselytism, for it must not be forgotten that Arabic is the sacred tongue of the Mussulmans. Mahomet spoke this consonantal, bony, energetic, poetic, singularly rich and strangely guttural idiom, and the Koran was written in it. By means of this book the Prophet's language is widely diffused over all Mo-

hammedan countries, — among the Iranians of Iran and Turan, among the Turks of Europe, of Asia Minor, and of the Turkestans, in India, among the Malays, in China and Siberia, even among the Tatars of Kazan, and as far as the Comoros.

Beside the people who are "pure" Arabs by speech or descent, or by both, there are some millions of men who are half-way Arabs, because as Islamites they mutter the Koran; and then there are other millions scattered over the lands that were conquered but not held by the heroes of the *djehad*, or "holy war," who are half Arabs because their blood owes something to Ishmaelitish germs. All these together, Europeans, Africans, and Asiatics, Sicilians, Italians, Spaniards, Portuguese, Catalans, and southern French, Berbers, Blacks, Kafirs, Abyssinians, Turks, Persians, Hindus, Malays, and Chinese, would make a powerful nation.

Coffee, perfumes, dates, gums, horses, asses, camels, and pearls constitute the



A WELL IN NEDJED.

wealth of Arabia, with the money which is brought annually into its holy cities by the hundred or hundred and fifty thousand pilgrims who come to worship in its sanctuaries. Arabia embraces an area about two-fifths that of the United States, and yet its population scarcely reaches $3\frac{1}{2}$ millions. Some of these are settled; there are said to be $1\frac{1}{2}$ million nomads who roam about in search of water and pasturage; they are also on the lookout for caravans, all of which they pillage, except such as are *en route* for the sacred cities of Mecca and Medina.

That portion of the population which is not Arabic and Mussulman is made up of Jewish and Hindu traders in the ports of the Red Sea, and of Negroes, the latter being much the more numerous. In many southern districts of Nedjed the Negroes form a third of the inhabitants, elsewhere they are a fourth, and in the state of Muscat a fifth. They are either free, or, if held as slaves, are kindly treated by their masters; alliances with them are degrading the nobility of the Arab countenance, and altering the essential characteristics of this magnificent race. Whether in consequence of marriages between the Blacks and the Arabs, or owing to a common origin in the

remote past, the southern Arabs bear almost as striking a resemblance to the Abyssinians as to their fellow-countrymen of Nedjed.

Outside of the Hejaz, Asir, Yemen, and Hasa, which belong to Turkey, and Aden, which is British, Arabia is wholly independent, and its tribes, governed by military aristocracies, make war or peace as they please.

The Hejaz and Asir.—The Hejaz, stretching along the Red Sea, includes the "Haram," or Sacred Territory, the cradle of Islamism; it contains the two venerated cities of Mecca and Medina, situated about 230 miles apart. Mecca (pop. 45,000) is 53 miles from Djiddah (pop. 17,000), a stifling port on the Red Sea. The holy city is surrounded by jagged, treeless, waterless mountains; but the wilderness is enlivened every year by the arrival of a hundred twenty thousand pilgrims, and armies of



MECCA.

camels. These pilgrims come from every Mussulman country in the world; they include sedentaries and nomads, men of every race and color, and representatives of every shade of the Islam faith. They come to worship the stone brought to Mecca by the angel Gabriel, to offer prayers to God on holy Mount Arafat, and to cast sixty-three pebbles at the devil in the gorge of Mina. The famous black stone is sealed in one of the walls of the Ka'ba, a small structure which has become the centre of Islamism, but which was originally perhaps a temple of Saturn; in every house, every tent, every field, and every desert where a Mussulman breathes, the suppliant turns at each hour of prayer toward the Ka'ba. — At Medina (pop. 16,000), 125 miles distant from the Red Sea, the faithful honor the tomb of the messenger of Allah. Before it became Medina, or Medinat el-Nebi, the "Prophet's city," it was Yathrib, a little neglected town lying among the chalk mountains and sands of the desert.

South-east of the Hejaz is Asir, comprising a hot district along the littoral and a temperate region on the ragged djebels.

Yemen — Yemen, south-east of the Hejaz, is the ancient *Arabia Felix*; it is largely mountainous. From its eminences the Abyssinian escarpments can be seen in the blue distance, when they are lighted up by the rays of the declining sun. Yemen, which was once renowned for its perfumes, is famous to-day for its Mokha coffee. The iman, or sovereign, resides in a temperate region 6988 feet above the seas, at Sanaa (pop. 50,000), a cool city, containing many beautiful palaces.

Aden. — Aden, on the gulf of the same name, is a strongly fortified and important commercial city; it belongs to the English, and furnishes a harbor for ships going to and fro between the Occident and the Orient. It is excessively torrid, a reflecting oven surrounded by white sands and dusky lavas.

Hadramaut — Hadramaut lies east of Aden, on the Gulf of Aden and the Indian Ocean. Above the coast rise mountains inhabited by a wretched but prolific race; certain districts here are as densely peopled as any in western Europe.

Oman. — As Yemen occupies the south-western horn of the peninsula, so Oman occupies the south-eastern; it has a seaboard on the Indian Ocean, the Gulf of Oman, and the Persian Gulf. The iman resides at Muscat, a very safe port in a notch in the lava, near Djebel Akhdar: this sovereign is at present powerless, but he ruled at one time over extensive coasts in Asia and in eastern Africa; he is now subject to the English in a certain sense.

Hasa. — The province of Hasa, which stretches along the Persian Gulf opposite the shore of Persia, is also inhabited by Arab tribes; this gulf has as much right, therefore, to the title of Arabic as the Red Sea has. Abundant springs gush up from its bed, and the province itself is in general well watered.

Nedjed and Djebel Shomer. — The Wahhabees are the predominant people in Nedjed; they have their capital at Riad. These Wahhabees are orthodox Islamites, who once cherished the hope of restoring the religion of Mahomet to its primitive simplicity; but this dream has vanished, like so many others. After having conquered Mecca, Medina, and Damascus, they fell back into their Nedjed, where they were vanquished, and their empire perished in its bloom. Even in the days of their youthful zeal, they warred against the use of tobacco more than against evil doctrines; in their eyes, smoking was the blackest of crimes.

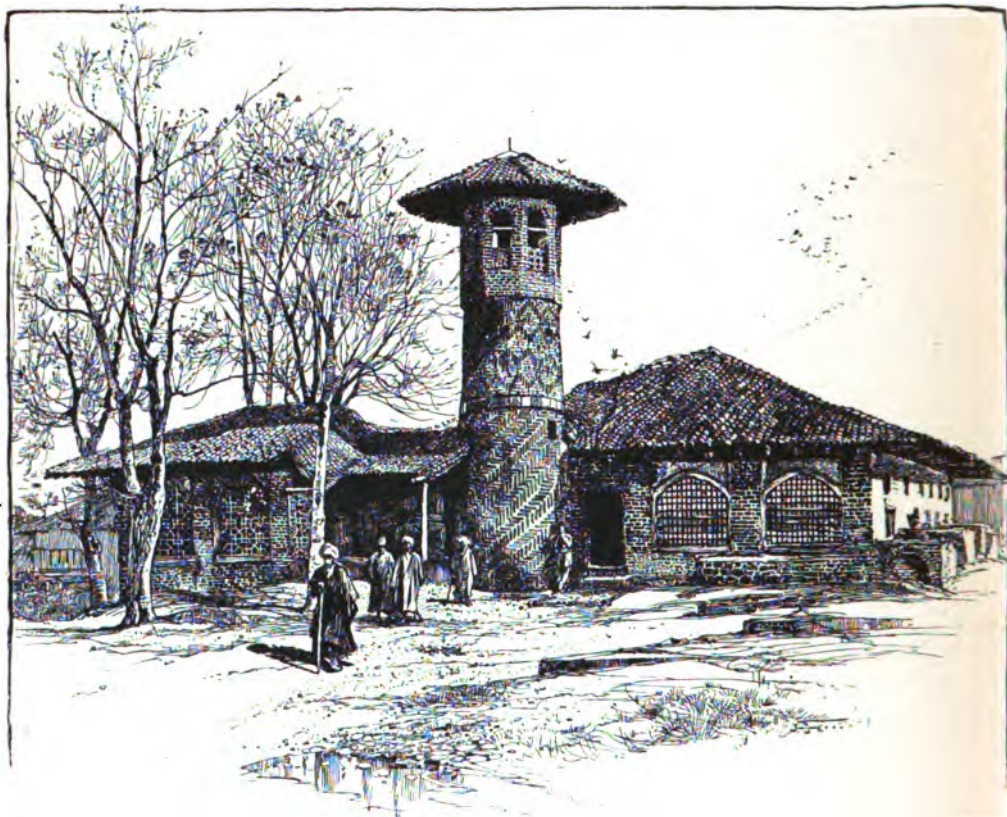
Hayel, north of Nedjed, is the residence of a sultan who is said to be the most powerful of all the chiefs of central Arabia; the town is situated 3500 feet above the seas, in Djebel Shomer, or Fennel Mountain.

PERSIA, OR IRAN.

The Plateau of Iran or Eran. — The Plateau of Iran or Eran extends from the Caspian Sea to the Indian Ocean, from the crest of the mountains which sink toward the Tigris to the rim of those overlooking the valley of the Indus. It has an area of about 1,060,000 square miles; of these, Persia occupies about 637,000 west of the high plains; the dismembered east forms the two states of Afghanistan and Beluchistan.

Iran is encircled by mountains, which intercept the moisture-bearing clouds from the sea, and is, on the whole, a very dry plateau, especially in the centre and south-east; the horizon is limpid, and the skies serene. The winds are not, however, silent;

on the contrary, they rage at times with fury, whirling snow or dust, but bringing so few beneficent clouds with them that fully a half of the plateau receives yearly not more than 4, 5, or 6 inches of rain; here and there, the fall in the highlands is 8, 10, 12, or 15 inches, and it is much greater north of the Elburz Mountains, in Ghilan and Mazanderan, a strip 375 miles long by 9 to 12 wide, bordering the Caspian. Continual and copious showers pour at least five times as much water over this district as on the neighboring valleys of the reverse slope. Vapors rise likewise from the Persian Gulf



A PERSIAN VILLAGE MOSQUE.

(435 miles distant from the Caspian), which descend again in scant showers on the coast sierra of Farsistan; there is here (though on a shorter seaboard) a zone analogous to the Caspian margin of Ghilan and Mazanderan; the former zone is, however, much drier than the latter. Of the mountains of the interior the heavens seem especially to favor those which despatch their torrents to the Lake of Urumiah.

As soon as we have passed the ridge of the sierras on the way from the sea, or from the lowlands of the Shatt-el-Arab, we find the desert invading the plateau with the sharpness of its outlines, the melancholy of its wastes, the dustiness of its sands, the harshness of its dry clays, and the brilliancy of its so-called lakes. Cypressess, poplars, and plane-trees announce from a distance the presence of a canal or, at rare intervals, a living fountain, around which a mud village is built. Sometimes massive

ruins of palaces and aqueducts, or heaps of rubbish, on a site the name of which has disappeared from Iranian memory, recall the splendor of ancient Iran, when its people was as yet unmixed with Arabs and Turks, when its plains were better watered, both naturally and artificially, and when its valleys were more thickly peopled, and its hills greener and woodier.

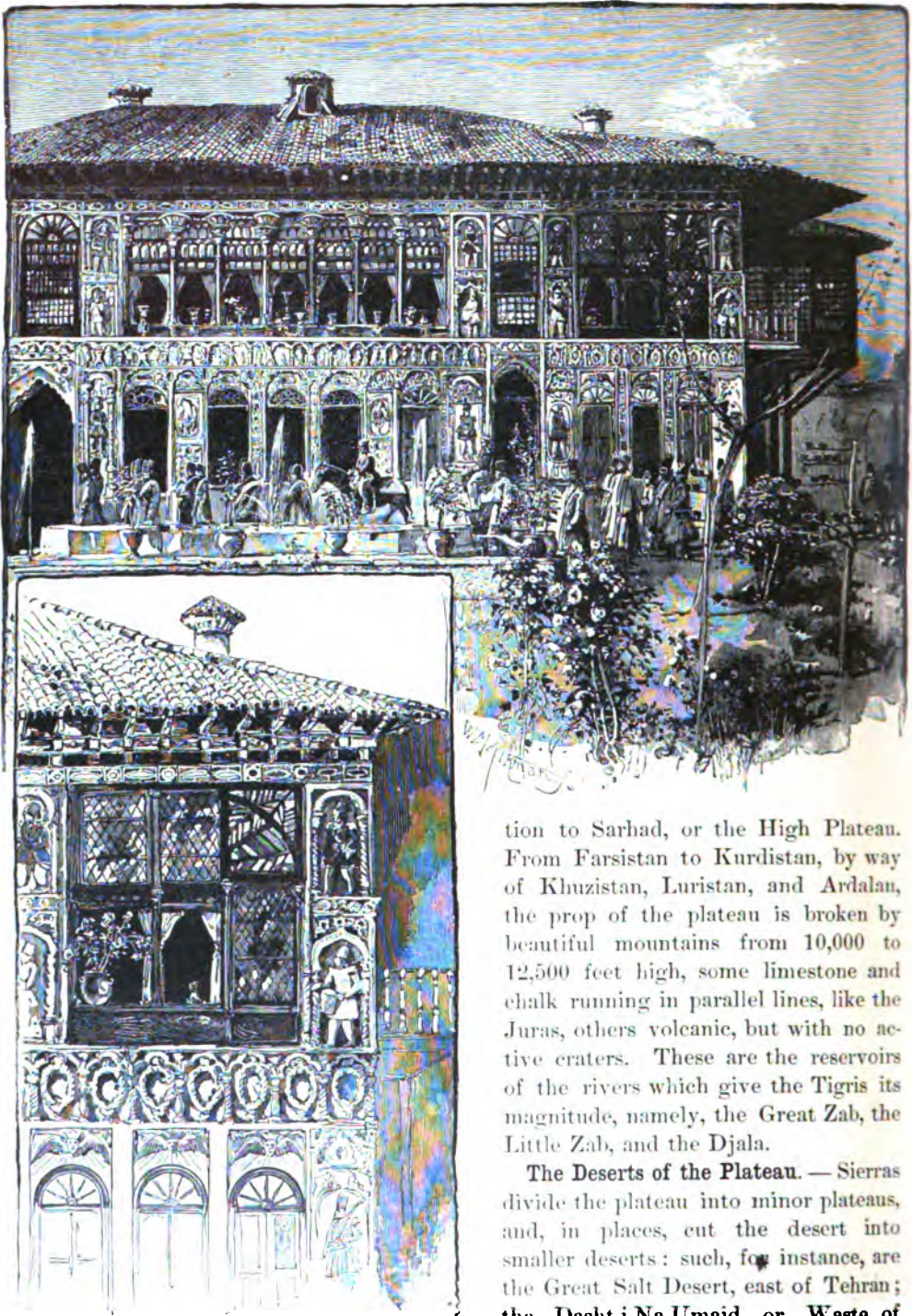
Elburz : Demavend. — Elburz, the *massif* which hides the Caspian from the Persian plateau, is nearly 440 miles long, with a breadth of about 70. It is longer than the Pyrenees, and it is loftier and not less complex than the Alps; on the horizon of Tehran (Teheran), to the north-east, it rears a snow-capped volcano, the furnaces of which are extinct; this peak, called Demavend (18,465 feet), is only about 100 feet below the Caucasus. Its true name is Divband, or Abode of the Gods; since earliest times the Iranians have peopled it with genii, and it appears everywhere in their myths and legends.

The strongest of all the Iranian springs is probably the Fountain of Ali (106 cu. ft. per second), in the mountains south-south-west of Astrabad. The most powerful of all its streams issues from the mountains of Kurdistan, then flows over the plateau, and finally bores into the Elburz, after having skirted it for 125 miles; it has filled in the Caspian with its deposits 15 miles beyond the old coast-line; in the upper part of its course it is called Kizil Uzain, and in the lower, Safid Rud; Kizil Uzain, or Red River, is a Turkish name; Safid Rud, or White River, is Persian. These names remind us that, since the dawn of history, Iranians and Turanians have contended with each other for the possession of Iran, and more especially of the northern districts.

The Lake of Urumiah. — The Elburz range is connected on the north-west with the Anti-Caucasus, through chains which reach the culminating point in Mount Savalan (15,893 feet), a volcano almost perpetually snow-capped, and without known eruptions; it divides its waters between the Safid Rud, the Araxes, and the Lake of Urumiah (the Dariatsha, or "little sea," of the Persians). The Lake of Urumiah covers over 1500 square miles, but it is shallow (46 feet in the deepest portions, with an average of 16), and it is constantly shrinking, because the torrents from the neighboring mountains are turned off to irrigate the fields and gardens. The water retained in the basin (4229 feet above the seas) is daily becoming saltier and more heavily charged with iodine. By a similar mineralizing process, all the other basins without outlets are drying up, even though they may drain, like Urumiah, 21,250 square miles of country which is less arid than many other parts of Iran. The whole immense Iranian table-land embraces 540,000 to 560,000 square miles of territory which has no communication with the sea; between 340,000 and 344,000 of this belong to Persia.

Farsistan. — Gurmsir and Sarhad. — It is possible that Mount Demavend may have a rival in the south, in Farsistan, or the true Persia, as its name indicates.¹ The Kuh Dinar range rises here into the region of persistent snows; the vast fields of ice platting this chain indicate, in this latitude (which is that of Alexandria), an elevation of 16,000 to 18,000 feet or more. These glittering summits are visible from the shores of the Persian Gulf, over and beyond other lofty mountains. At the southern base of the chains of Farsistan and Laristan, which are so rugged that the paths up their slopes are called ladders, a narrow strip of coast, scorched by excessively hot and feverish suns, extends as far as the Persian Gulf; the Persians call it Gurmsir, in opposi-

¹ Farsistan means "country of the Persians."



THE GOVERNOR'S RESIDENCE AT RESCHT.

tion to Sarhad, or the High Plateau. From Farsistan to Kurdistan, by way of Khuzistan, Luristan, and Ardalan, the prop of the plateau is broken by beautiful mountains from 10,000 to 12,500 feet high, some limestone and chalk running in parallel lines, like the Juras, others volcanic, but with no active craters. These are the reservoirs of the rivers which give the Tigris its magnitude, namely, the Great Zab, the Little Zab, and the Djala.

The Deserts of the Plateau. — Sierras divide the plateau into minor plateaus, and, in places, cut the desert into smaller deserts: such, for instance, are the Great Salt Desert, east of Tehran; the Dasht-i-Na-Umaid, or Waste of Hopelessness, near the Afghan fron-

tiers; the Lut, or Waste, north of Karman, an excessively dry and burning plain, studded, like so many other rainless deserts, with *kavirs*, or saline depressions, where a little water collects from the melted snows or from heavy storms, only to ascend again immediately into the air; and, lastly, the Dasht-i-Kavir, or Saline Plain of Yezd, whence the Fire-Worshippers hope to see Yazdegerd, their last king, who was dethroned by the Arabs in the first half of the seventh century, issue one day as conqueror, avenger, judge, and pontiff. These wastes, lying in Algerian and even Saharan latitudes, are subject to severe winters, but the summers are suffocating on the stony fields as well as in the evaporated marshes and on the shifting dunes. The altitude of the plateaus and sub-plateaus varies greatly, but the mean is about 4000 feet.

The Persians and their Language. — Sprung from the same stock as the Aryans of India and Europe, the inhabitants of ancient Iran chanted in the childhood of the race the same songs with the fathers of the European tongues, and prostrated themselves before the same gods. For two centuries they occupied the first rank in the Orient; but to-day they are poor and powerless in their harsh climate, on their beggarly, dry soil, exposed to famine, trodden under foot at home and despised abroad. The Persians leaped suddenly into power under Cyrus; they captured Babylon, the queen of cities, and established their rule from India to the Hellespont, over 50 million men, it is said. Their empire lasted down to the victory of Alexander at Ar-
bela. But it was not constituted to endure, framed as it was out of hostile peoples, between whom stretched mountains and deserts. And, not including Susian, Armenian, and the idioms of various small nations, it recognized three official tongues; these are found, each translating the other two, on the rocks, or the tables of those cuneiform inscriptions the arrow-headed characters of which recount the triumphs of many a superb ruler. The first of these tongues was Persian, an Aryan language; the second was Medián, a Turanian idiom, or, according to some, Dravidian; and the third was the Semitic Assyrian.



A PERSIAN WOMAN.

The Persians call themselves Tadjiks, that is, the Crowned, or, possibly, the Invincible. Their history is linked with that of Greece, the country which barred their entrance into Europe; with that of Rome, whose route to India they intercepted; with that of the Arabs, who imposed upon them a new faith; and, later, with that of the Mongols, Turks, and Hindus; and, lastly, with that of the Europeans. If in ancient times one of those audacious leaders who dictate the course of events had moved the Persian capital along one of the routes leading from the Iranian plateaus to the regions watered by the Oxus, — to Herat, for example, — he would, perhaps, have indissolubly united the Tadjiks of the Sir and the Amu to those of the vast uplands stretching from the cols through which the old heroes of the nation fell on Babylon to the passes through which the modern Persians have descended on India. These eastern brothers would have won the ascendancy over the mobbing Turkish hordes, and Persia would to-day embrace Iran, Turan, and Pamir; whereas, the Iranians do not at present possess the whole of Persia. As regards language and national feeling, little of the country, except the southern half of the socle between the Caspian Sea and the Indian Ocean, is absolutely Iranian. As for the race, it is very much mixed, even in the localities where it has remained purest; on this old highway of the peoples, it has been penetrated by elements of every sort, including Arabs, Jews, Kurds, Armenians, Turks, Georgians, Circassians, Afghans, Hindus, and even Negroes and Negroids from Africa.

A Turkish proverb says: "The young Persian man and the Moldavian horse are unrivalled." The Tadjiks are, in fact, an extraordinarily handsome and graceful race. They have expressive eyes and black, fine, abundant beards; in conversation they are charming; they are remarkably polite, but take delight in the grossest forms of flattery; they have keen intellects and very retentive memories, and, above all, they forget nothing of the glory and grandeur of their long past. But this past will never be revived, for they are hemmed in on all sides by valiant Turks, Afghans, and Arabs. The Persian idiom is a descendant of Old Persian. The latter belonged to the same family as Zend or Old Bactrian, which was spoken in the eastern part of the plateau, while the language of the conquered of Marathon prevailed in the west. New Persian has allowed many of the noble forms of the language to disappear; it has engrafted on its trunk great numbers of Arabic¹ and Turkish words, and it is disfigured with many incongruous terms; but its poets, Hafiz, Firdausi, and Saadi, are the delight of the Orientals. It is spoken more perfectly at Shiraz than anywhere else. Only two hundred years ago Persian was one of the most widely diffused languages in the world. Preference was given to it in the palaces of the Great Mogul; it was employed from end to end of the Hindu empire, in politics, literature, and society; men of letters and the aristocracy made use of it in all the Mussulman countries, from Constantinople to Bengal, from the Sea of Aral to the Persian Gulf, from the Isthmus of Suez to the Bam-i-dunya. But those days are no more. In India it is fleeing before Hindustani; the people of Turkish Asia are forgetting it; aside from a certain literary royalty in the Orient, nothing remains to it outside of Persia, except in Afghanistan, where it ranks as the enlightened tongue, and in Turkestan, where it is spoken, concurrently with Turkish and Russian, by multitudes of urban and rural Tadjiks and by a large number of Sarts.

Six or seven hundred thousand Kurds, who are related to the Tadjiks by language, if not by race (of which we are by no means sure), dwell in the Alps of Kurdistan.

¹ Out of every ten words of the language, four are nearly or wholly Arabic.

The north and north-west, notably Azerbaïjan, are full of Turks; there are Armenians in the basin of the Araxes, and Arabs on the Persian Gulf.

Persia probably contains $7\frac{1}{2}$ million inhabitants;¹ it is supposed that over 4 million of these speak Persian. More than $2\frac{1}{2}$ million make use of Turkish, in Khorasan, in Azerbaïjan, and, in general, north of the route from Tehran to Hamadan; even in the capital, Turkish is in frequent use. Its empire is, however, contracting; it has ceased to be spoken at court, and nearly all the Turks now understand Persian. The men whose maternal idiom is Turkish are, for the most part, much less polished than the Tadjiks; but they are stronger-bodied and more upright of conscience; they are frank and proud-spirited, and regard a lie as dishonorable. As these Turks are separated from the Osmanlis of Anatolia by sect differences (they profess Shiism; the Anatolians, Sunnism), they do not imperil the Iranian nationality. To the Kurds, who rank third in number, we must join their cousins by language, the Luri² of Luristan, on the upper Kerkha. The Arabs are estimated at 300,000. As for the Armenians, who have lost largely by emigrations to Russian territory, they will hereafter form a very insignificant element of the Persian population.



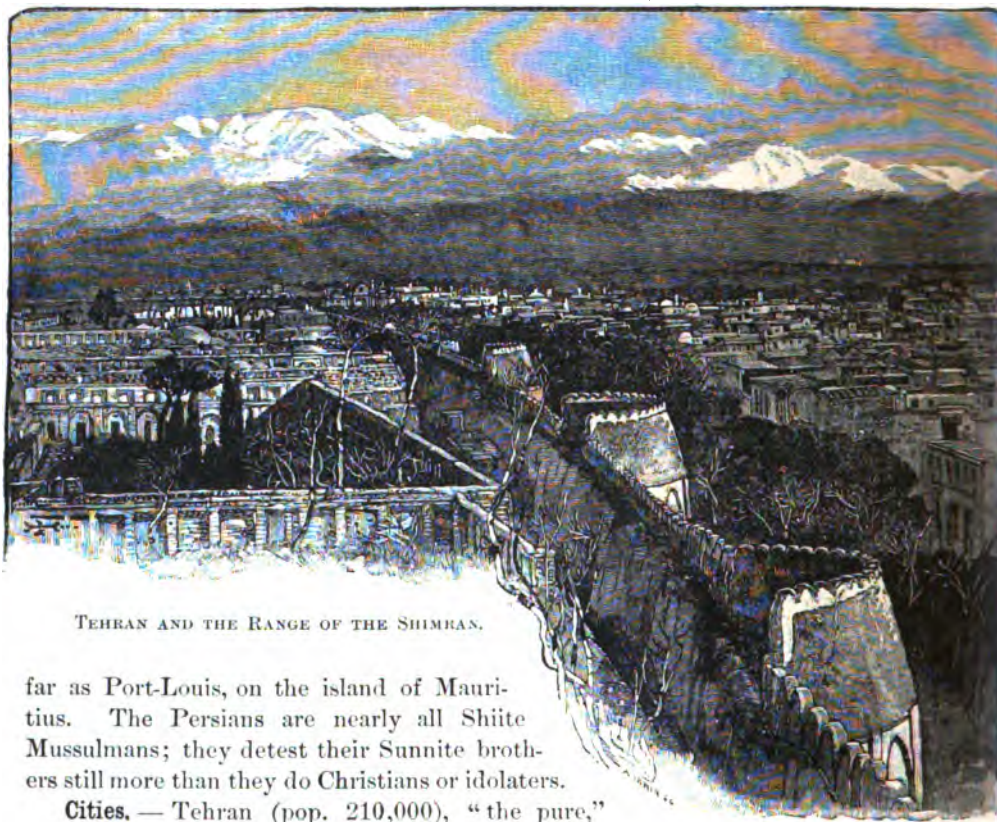
INDOOR COSTUME OF PERSIAN WOMEN.

One of the great religions of antiquity, that of Zoroaster and the sacred books of the Zend language, originated in Persia; it consisted in the adoration of the sun

¹ Different travellers have put the estimate at six, seven, eight, or even ten millions.

² Although eminent authorities have differed widely as to the classification of the Luri, it seems now pretty certain that they belong anthropologically in the same class with the Kurds. — Ed.

and stars, the worship of Ormuzd, the principle of light and purity, and the fear and reverence of Ahriman, the evil genius. Only a few have remained faithful to this religion, and these few are called Fire-Worshippers, Ghebers, and Parsees; this last term is synonymous with Persians, and, in fact, the Parsees are the only Iranians who have been true to ancient Iran; they number less than 8000 here, 6500 of whom are in Yezd and the neighboring villages. But, outside of Persia, they form clans of rich merchants, in the great cities of India, especially in Bombay, on the island of Ceylon, in Aden, on the Red Sea, in Turkey in Asia, on the eastern coast of Africa, and as



TEHRAN AND THE RANGE OF THE SHIMIRAN.

far as Port-Louis, on the island of Mauritius. The Persians are nearly all Shiite Mussulmans; they detest their Sunnite brothers still more than they do Christians or idolaters.

Cities. — Tehran (pop. 210,000), "the pure," is situated at an altitude of 3098 feet, on saline soil, in sight of Mount Demavend, 9 miles from the Elburz chain and 70 from the Caspian Sea, almost on the line of separation between the Iranian and Turkish elements. It has recourse for water to canals from the lofty mountains. In summer, the Shah, or Emperor, flees with his 40,000 servants, flatterers, and parasites from the fevers, the oven-like heat, and the poisonous vermin of this clay city, to cool mountain-valleys, where he installs his court under tents. Tehran has been the residence of the Shahs since 1798.

The route from the new capital to the old, from Tehran to Ispahan, passes the manufacturing town of Kashan (pop. 30,000), a flourishing city, although Persian.

Ispahan, or Isfahan (pop. 60,000), lies 4698 feet above sea-level. This city of the great Shah Abbas, which once contained 600,000 souls, is much more strongly

Iranian than is Tehran, which has dethroned it. It is situated almost in the centre of the inhabited portion of Persia, on the banks of the Zainda Rud, a torrent which filters into the plateau, then reappears, only to be lost again.

Columns, gigantic statues in which the animal and human forms are combined, huge walls, cuneiform inscriptions, and pointed rocks constitute the remains of another and superb Persian capital. Persepolis, whose proud abodes were burned by Alexander of Macedon to gratify the fancy of a beautiful Greek woman, occupied what is now called the Palace of Djamshid (Takht-i-Djamshid), or the Forty Minarets (Chihil menare); it is on the margin of a swampy plain which is traversed by the Bendamir, an affluent of Lake Niris. South-west of the dead city stands the living town of Shiraz (pop. 30,000), the "Athens of Iran." The mountaineers of Farsistan, the province in which Shiraz is situated, were the founders of the Persian hegemony. The city is 4429 feet above the seas. At a distance it is an imposing pile, but near by it is mean and sordid; it rises within sight of warmly colored, naked rocks, in the midst of pines, cypresses, and palm-trees. The Orientals vaunt its climate, its wines, and the scent of its roses; but this fine climate is feverish, and the soil is unstable. In the north-west of the empire, on ground which has often been shaken, is Tabriz, or Tauris, the Kandsag of the Armenians; its population, perhaps, exceeds that of Tehran; it outranks Tehran in trade and manufactures; the waters which are brought in canals into its cool, fresh gardens, at an altitude of 5000 feet, flow off into Lake Urumiah. It once had 500,000 inhabitants.

Meshed (pop. 60,000), at an elevation of 3051 feet, the glorious sanctuary of Khorasan, each year witnesses an increase of the multitude of pilgrims who come to pray before the tomb of Iman Riza; it is growing in sanctity in the eyes of the Shiites, and rivals the holy Kerbela itself.

Yezd (pop. 40,000), an industrial town, marks very nearly the centre of Persia; it is situated in an unbroken desert, where the dunes are forever moving against it.

COUNTRIES DETACHED FROM IRAN.

AFGHANISTAN.

The Hindu Kush. — The Helmand and the Hamun Morass. — Afghanistan¹ prolongs the high plateau of Persia as far as India and the mountains of central Asia; on the west, nothing separates it from Iran, and the traveller along the common frontier of the two countries sees on either side the same sandy plains, the same level, stony tracts, the same salt lagoons, and, in the distance, mountains of the same color and of the same general aspect. But on the north and east the country has bold limits; the Hindu Kush, or, rather, the chain which continues the Hindu Kush to the west, rises on the north. This "low Hindu Kush," in which the Koh-i-Baba, or Father of Mountains, reaches an elevation of 17,999 feet, separates the true Afghanistan (that of

¹ The area of Afghanistan is estimated at 278,000 square miles. — ED.

the plateau and the elevated valleys, that of the Helmand and of the Kabul) from the conquered district lying along the rivers which descend toward the Oxus, but which dry up on the route. By the course of its waters, its history, and the probability of its waking up some day and finding itself Russian, this region belongs to Turk-estan. The barrier on the east between Afghanistan and India is nowhere imposing except from the low country on the banks of the Indus. Viewed from Afghanistan



THE BALA HISSAR, OR ACROPOLIS OF KABUL.

itself, which stretches out as a long steppe toward the west, this chain, called the Suleiman Mountains, is devoid of all grandeur, for the elevation of the plateau robs it of half its height. Moreover, in the neighborhood of the Himalayas, what is an altitude of 11,683 feet, that of Pirghul, the principal peak of this eastern rim? North of the Suleimans, and south of the Hindu Kush, Safid Koh, or White Mountain, at present isolated from the Roof of Asia by the fissure through which flows the Kabul, a violent tributary of the Indus, nearly equals the European Mont Blanc, in its Sita Ram (15,622 feet).

The Kabul is formed from very lofty snows, and carries a great volume of water.

Its affluent, the Kuner, which has the principal *massif* of the Hindu Kush in its basin, is still more abundant. But the longest Afghan river is the Helmand (680 miles); it has a drainage area of over 19,000 square miles. The Helmand rises near the Koh-i-Baba and never reaches the sea; it flows south-west, sending an infinitude of rills over a parched district, and then the little that soil and sun have left of its floods is discharged into the Hamun, a desolate, brackish lagoon, surrounded by reeds and rushes, and situated about 1300 feet above sea-level.

The Hamun was formerly much larger than it is now; as it lies under a sky which is almost as arid and devouring as the Libyan vault itself, it will continue to diminish, and in the end will be wholly obliterated. The Helmand and its affluents, the strongest of which is the Arghand-ab, are bled at every vein and veinlet by canals which cover the valleys with verdure, and but for which Afghanistan would be nothing more than dry pasture-lands. Afghanistan lies in the temperate zone; but, as it is shut off from the sea by some of the loftiest crests of Asia, as it is absolutely continental, it suffers equally from extreme cold and extreme heat. The summers are as cruel as the winters are savage. In the west is another and larger Hamun, which receives a number of torrents smaller than the Helmand; and, far away to the north-east, the Ab-i-Istada, or Sleeping Water, at an altitude of 7054 feet, gathers what the thirsty fields leave to the river of Ghazni.¹

The Afghans. — Afghanistan corresponds in part to what the ancients called *Aria*, *Arachosia*, and *Drangiana*. On its plateaus, in a climate which is harsh, but healthful except in the mephitic regions around the Hamun, lives a people which has never been enumerated, but which has been variously estimated at 6, 8, or 10 millions; it probably does not much exceed 4 millions, not including the inhabitants of Afghan Turkestan. The Afghans are of unknown origin. They come, perhaps, from Khorasan, a country forming a province of Persia, near the Black Sands, from which it is separated by the sierras which continue the Hindu Kush to the shores of the Caspian, opposite the Caucasus range. They call their country *Pukhtun-khwa*. Their tongue, the Pukhtu or Pushtu, has some ties of kinship with Persian, and still more, apparently, with the Aryan languages of India. However, though a brother or cousin of these harmonious idioms, it is so harsh and disagreeable to the ear that Mahomet called it the "language of hell," — and the Prophet himself spoke the more than rude and guttural Arabic. The Afghans are mostly dark-skinned; hardened by their climate, they are vigorous, brave, blood-thirsty, and vindictive; they shook off the Persian yoke toward the middle of the last century, and, since then, the terrible sky, the chaotic mountains, the famished, thirsty steppes, and the bridgeless torrents, which they cross on rafts or by treacherous fords, have protected them from re-enslavement. Their Russian and English neighbors are already disputing for their possession, but without daring to subjugate them; when once these men have been subdued by either power, the last barrier will be levelled, the Slavic empire will touch the British, and the strength of the latter will be broken, at least in Asia.

So turbulent a people, dwelling in such a mountainous land, is not constituted to obey without a murmur; the Afghans are divided into several small "nations," or *zai*, which, in their turn, are subdivided into tribes and clans (*khel*). Reckoning the inhabitants of Afghanistan (not including the region beyond the Hindu Kush, but embracing the mountainous land of the Dards and the Siah-posh) at 4,200,000, the Afghans constitute almost exactly a half, say 2,100,000, in 400 clans. Their most

¹ It is said that the temperature of Ghazni sometimes reaches 131° F. in the shade.

powerful "nation," the Durrani, 700,000 in number, conquered and united Afghanistan, if it may be said to have any unity, — this country which, with the 2,100,000 Afghans, comprises 800,000 Persians, who constitute the bourgeoisie of its cities, or the peasantry of its Kohistan and of Seistan; beside 600,000 Mongols, most of whom speak a Persian dialect, as do the Tadjiks or Parsiwan; more than 100,000 Turks and Turkomans, and 150,000 Siah-posh, 300,000 Dards, etc. However, roughly speaking, the Afghans, in the broad sense of the term, profess the same Mussulman religion (except for sect differences), and make use of the same national tongue, Pushtu, and the same literary tongue, Persian.

Kabul (pop. 75,000) borders the Kabul at an altitude of 6411 feet, on the shortest route, as well as the most practicable for armies, between Europe and India, between the Hindu Kush, Safid Koh, and Koh-i-Baba.

Kandahar (pop. 60,000), or Kand, spreads out its orchards at an elevation of 3497 feet, along canals derived from the Arghand-ab.

Herat (pop. 50,000), the "city of a hundred thousand gardens," is in a healthful climate, 2690 feet above sea-level; its clear waters are brought through nine canals from the Hari Rud. The latter is one of those long rivers which the old Paropamisus sends toward the Oxus, but which dwindle away on the route; it is lost on the margin of the Black Sands, not far from Merv. Owing to its situation on the highway between the Caspian and the Indus, Herat has been called the first key of India, Kabul being the second. The surface consists of verdureless mountains, with a few irrigated districts, occupied by Persians, Afghans, and Turkomans; — the Persians predominate.

Kafiristan. — Dardistan. — The interposition of lofty and difficult mountains isolates the true Afghanistan from the conquered districts beyond the Hindu Kush; but Kafiristan and Dardistan, where the Afghans are not the dominant people, ought, it would seem, to belong to Afghanistan, considering the direction of their deep valleys, which open on the river Kabul. Kafiristan has an excessively rough surface; it contains, perhaps, 500,000 inhabitants, on something less than 20,000 square miles. Little is known of these men, who are called Siah-posh, or "black-clad"; they are blue-eyed, with light hair and beard, and their features are clearly European. They doubtless descend from a tribe left in these Alps at the time when a migratory wave dispersed a part of the Aryans over Iran and over northern India. By some scholars they are thought to be descendants of deserters from Alexander's army.

The Siah-posh are pagans; as such, they detest their Mussulman neighbors, and their Mussulman neighbors abhor them; the name Kafirs, or, in other words, Infidels, has been bestowed upon them, — and from Kafirs we have Kafiristan. Their language is Aryan, and is even quite closely related to Sanskrit, but Pushtu, which is widely diffused among them, is the important tongue, the civilized idiom of Kafiristan, and also of Dardistan. The latter division is inhabited by Dards; it extends east of Kafiristan, as far as the Indus, in a chaotic mass of mountains which send their waters into the Kabul or directly into the Indus; it is situated in the basin of the Kuner, and possesses the culminating peak of the Hindu Kush, Tirich Mir, more than 24,500 feet high.



KHELAT.

BELUCHISTAN.

Beluchistan, or Brahoistan. — Brahoes and Beluches. — Beluchistan is occupied by two races, the Brahoes and the Beluches. The Brahoes are considered the dominant race; they are the more numerous, they have been in the country longer, they possess the great city of Khelat, and they have given Beluchistan its most powerful families. Although the Beluches are more or less Aryan, and the Brahoes are not Aryans at all, Brahoistan would be a more suitable title than Beluchistan.

Beluchistan is the ancient *Gedrosia*; it embraces 130,000 square miles, with only 500,000 inhabitants. For a little over a century this country, which was subjugated first by the Persians and then by the Afghans, has belonged to tribes that are nominally free from foreign rule; but they are under British protection, with an Anglo-Indian garrison at Quetta, on the route between Khelat and Kandahar.

On the Gulf of Oman is a narrow, burnt, stifling, and almost uninhabited district, called Mekran; behind this coast rises a chain of ribbed, scarped mountains, and on the east, above the valley of the Indus, are the Halas, which reach elevations of 5000 to 6900 feet; both of these ranges support a plateau of gravel, dunes, and dried pasture-grounds, which stretches toward the lofty plains of Persia and of Afghanistan; in the extreme north, limestone sierras tower to an altitude of 10,000 to 12,000

feet. Beluchistan is a brazen region with false rivers, false lakes, bony mountains, and flaming skies. Alexander's army, on its march from India, barely escaped being devoured here. No jutting hill-top revealed to the Macedonian phalanx a valley which recalled their native Europe, a fresh Tempe with living springs, meadows, and winding rivers. In summer, suffocating clouds of sand are raised by the fiery Simoon; in winter, the snows whirl over a white immensity. When the snows melt, the torrents swell to rivers, but these soon dwindle away; a few pools remain here and there, at which the leopard, the black bear, the wolf, the hyena, the wild boar, the gazelle, and the wild ass quench their thirst. Great herds of the last named animal are to be seen galloping at cavalry speed over the echoing plains.

The Sunnite sect of Islam has almost complete sway in the cities and under the felt tents of the scattered nomads; the latter are divided into a multitude of tribes, clans, and sub-clans, which are governed by *sirdars*, or chiefs, who recognize, to a certain degree, the suzerainty of the Brahoe khan of Khelat. The easternmost of these tribes are Brahoes; they are a peaceable people, speaking a half Dravidian language, which is related to several tongues of the Deccan, or southern India. On the west, north, and north-east of the Brahoes are the Beluches; they are handsome, well formed, robust, agile, and undisciplined; they make use of an idiom resembling Persian, but their origin is uncertain. They may have come from the north of Arabia, or from the mountains of Kurdistan, or from the Syrian djebels; and possibly they come from all these districts at the same time, for they are evidently very much mixed. There is also a numerous colony of Dehwars, or Persian-speaking Iranian peasants, who cultivate the soil and irrigate it as best they can from springs and reservoirs; these are not the only inhabitants who speak the elegant, flowery, but too much Arabicized idiom; the court, the aristocracy, and the lettered employ it.

Khelat (pop. 14,000), or Kalat, the capital, is situated at an altitude of 6700 feet; the climate is rude, with more than two months of snow. The town derives its water from a fountain which gushes up with the abundance of a river. The name Kalat, signifying "stronghold," is often met with in Mussulman Asia, in Arabic and Berber Africa, and even in Spain, where we encounter it in the very heart of Madrid, in the street of *Alcalá*.

INDIA.

Size of India. — This country comprises more than 1½ million square miles of territory, two-thirds of which is uncultivated; it contains some 285 million inhabitants. On the north rise the loftiest peaks of the earth; at their bases, and composed of their snows, flow three mighty streams; south of these streams, at the extremity of torrid plains, stretch wooded mountains, and beyond these mountains spreads a vast triangular plateau, which is tropical in latitude but temperate owing to its altitude.

India is a land of marvellous wealth and fertility, but at the same time it is the mother of fever, of cholera, of leprosy, of famines, and of cyclones. At a distance from running waters or from the canals, the long suns often scorch the harvests of an entire district, causing famines like those of 1868 and 1877, which destroyed millions of inhabitants. Cyclones carry off a less number, but their fury shows man how pow-

erless he is on the globe where he thinks himself king. In a few moments the sky blackens, the wind rushes with terrific speed from every quarter of the heavens; it rises and sinks, it plunges and whirls, and fills the entire air as far as the leaden clouds. The sea swells and drives back the rivers, raising them 10, 20, or 30 feet, and the floods, breaking over the plain, hurl large vessels into the fields. In the autumn of 1876, during a cyclone, a tidal bore drowned more than 200,000 men in the mud of the Gangetic delta, and cholera, that terror of the world, was generated in the decaying bodies of man and beast.

Beside these great enemies, there are lesser ones, such as hidden serpents and crouching tigers. Land serpents, water serpents, 80 different species of venomous reptiles glide through the forests, swamps, and thickets of India. The country swarms with cobras, the most dangerous of all serpents; it is estimated that there are over a thousand of these to every square mile in the district of Mysore. Fully



THE RIVER JHELUM.

20,000 persons die annually from snake-poison, and hundreds, sometimes thousands, are killed by wild beasts. Tigers issue from every forest, and lurk day and night around the hamlets and even within the suburbs of the cities. Some of them devour perhaps a hundred persons yearly; when they have once tasted human flesh, no other will satisfy them. If India had not so many woods, jungles, and reed thickets, man could in the end conquer this foe. The lion, which has become very rare in India, has not the majestic mane of its African brother; the elephant is rare also, but the rhinoceros still wallows in the mire of the gigantic delta where the Ganges and Brahmaputra unite.

The Himalayas. — **The Karakorum.** — Himalaya means, literally, "Dwelling-place of Snow," from the Sanskrit *hima*, frost, and *ālaya*, abode. The snow-line oscillates here on the slope toward India between 15,750 feet in the east, where the hot, moist winds blow from the Bay of Bengal, and 18,540 feet in the west, where the winds are dry and continental. Immense expanses of persistent snows whiten these sovereign mountains where hundreds and hundreds of tops tower above 16,000

and 18,000 feet. The culminating peak of all these summits is the Radiant (29,002 feet), the Gaurisankar of the Hindus, the Chingopamari of the Tibetans, and the Everest of the English, who have not been afraid to strip this monarch of the world's eminences of its beautiful, sonorous name.¹ Kinchinjinga (27,832 feet), or the "Five Sparkling Snows," supports five vast glaciers on its gneiss. Dhawalaghiri, or White Mountain (26,838 feet), usurped for some time the rank and honor of the supreme summit of the earth. The loftiest snows yet trod by the foot of man are in the Himalayas, where an English mountaineer, Mr. W. W. Graham, has recently ascended to an altitude of 23,700 feet.

The Karakorum chain, which is separated from the Himalayas by the valley of the upper Indus, rears Mount Dapsang (28,281 feet); this summit ranks second among the peaks of the globe, admitting (what is very probable) that Gaurisankar stands first. The cols of the Karakorum² are supposed to be higher than those of the Himalayas. The glaciers on all these mountains are worthy of the Titans which support them. The Baltoro *mer de glace*, in the Karakorum masses, under the eye of Mount Dapsang, is 35 miles long; those of Bialo and of Chogo exceed 30 miles in length; those of Sai Char and of Muztagh are also very vast, as well as those of the superb *massifs* of Zaskar, and many others, in Cashmere and in Balistan. All these glaciers form the sources of turbid, untamable torrents, which run to the Indus and the Shayok, and to affluents of the Indus, the Ganges, and the Brahmaputra. The greatest of these wintry fields are not to be found in the rainy Himalayas, that is, in the eastern part of the range; they sparkle in the west, on the dry mountains where the Himalayas and the Karakorum meet. The southern slopes of the chains would naturally retain less snow than the northern declivities facing glacial mountains, which are themselves seated on cold plateaus. But the contrary is true. The Himalayas, the first and highest barrier on the south, encounter the clouds and vapors driven inland from the seas, and absorb nearly all their moisture, but the Tibetan plateaus, sunk behind this chain, are unprecedentedly dry. Hence the inferiority of Tibet, and the superiority of India: in one, we find dry, arid, frozen, windy valleys from 11,500 to 14,750 feet above the oceans; in the other, the rains are copious, and 50 to 65 feet of water fall annually on the Cherrapoonjee highlands.

The Indus, the Punjab. — At the very base of the Himalayas extends a marshy margin known as the Tarai, a tract covered with thickets of gigantic reeds, exhaling miasmata and overhung with fogs; above this region, in gardens interspersed with forests, the English have built sanatoriums, in the pure atmosphere of which the European seeks a cure of the poisons imbibed in the lowland.

On the north-west, the Indus pierces the Himalayas, to enter India; 900 to 930 miles from the Indus, at the other extremity of the arc described by these mountains, the Brahmaputra also runs around the giant range; between the two streams flows the sacred Ganges. Before penetrating into the lowlands, the Indus, or Sindh, flows behind the Himalayas, first on a high plateau, and then at the bottom of sinister gorges, which are scarce broad enough to give it passage. During the first five hundred miles of its course, it is called in the Tibetan tongue the Sinh-ka-bab, or Lion's Mouth, and also the Tsu-fo, or Male River, as opposed to the Tsu-mo, or Female River, the name given to the Shayok, which descends from the bastions of the Karakorum. From its sources to Nanga Parbat (26,628 feet) the Indus moves west-north-

¹ See Mr. Freshfield's remarks on this subject, *Alpine Journal*, Feb., 1886.

² The pass between Cashmere and Turkestan (18,701 feet) is 902 feet above the highest Himalayan pass.



THE GANGES AT CAWNPORE.

west, as though seeking the Caspian or Aral; then, changing direction, it takes the way to the Arabian Sea. In 1841, Nanga Parbat, a colossus plated with glaciers, sank on one side into the Indus, causing it to set back as a lake; when the dam of rock and earth gave way, the torrent which was precipitated into the valley suddenly poured almost as much water into it as a river of 700 cubic feet carries during a whole year; and, at a long distance from the obstruction, near Attock, the Kabul set back 20 miles before the huge waves of the Indus. The descent of the stream is so rapid that, though it rises 21,982 feet above the ocean, its altitude is not more than 889 feet when, less than half-way from the mountain to the sea, it encounters the Kabul near Attock. — The Kabul is a much shorter river than the Indus, but stronger on an equal area; it is a veritable gate of India. It is by following the course of this stream that invaders have entered the peninsula from prehistoric times; it is by this route that England awaits the apparition of the Cossack scouts, and it is here that the highway from Europe to the land of the Indus and the Ganges will one day terminate.

A few gorges more and the Indus enters the plain of the Punjab, which extends eastward as far as the Ganges, from river to river, and southward to the dunes of the desert of Thar, where the annual rainfall is only 6 inches, — the most meagre in all India. Midway between the Kabul and the ocean it encounters, on the left, a seemingly superior current (though inferior in volume); this stream, the Panjnad, literally "The Five Rivers," does, in fact, unite five streams, namely, the Sutlej, the Bias, the Ravi, the Chenab, and the Jhelum. — Instead of five, there were seven of these rivers in the days when this basin was called *Sapta Sindavah*, or the Seven Streams. Either the country is more arid, or some convulsion of nature has altered the distribution of its waters. — The Sutlej receives the Bias; the Chenab, the Ravi, and the Jhelum form the Tremab, or "Three Waters"; and, in their turn, the Sutlej and Tremab form the Panjnad, which has a volume of nearly 17,500 cubic feet in dry weather. This flow is reduced in the hot lands to 11,864 cubic feet, and the Indus rolls at the confluence 14,830.

The Sutlej, which issues from behind the Himalayas (from the lofty, sacred lakes of Manasarowa and Ravan-hrad), through terrible cañons, over which hangs a heavy heat, in 1762 had a temporary lake, like that of the Indus; it was formed by a landslip. The water collected for 40 days, and then levelled the obstruction and rushed madly over the entire Punjab, scooping out and filling up river-channels. Near Kistawar the Chenab receives a torrent which falls 2493 feet. The Jhelum drains the lakes of Cashmere, and issues from this "Paradise of the Orient" through the deep gorges of Baramula. Swollen by the Panjnad, the Indus flows down along the naked wall of the Indo-Persian mountains of Safid Koh, Suleiman Dagh (11,683 feet), and the Halas, which form the rim of the plateau of Iran; then it leaves on the left the sand-pits of Thar. Its delta of 3000 square miles, formed by twelve arms, is a melancholy depression of swamps and sands, at the extremity of which the stream, glutted with alluvia, overflows to a long distance during the floods. These plastic elements, however, lengthen the Indus but slowly; the deposits are mostly lost to the delta, either because the sea disperses them, or because it concentrates them in the south, in hollows 1300 feet deep. If nature or man were to give another direction to the alluvia, it might be possible to fill up the Runn of Cutch, a vast level tract, which is sometimes sea and sometimes desert. When the ocean, cutting through the obstruction of the sand, penetrates it, the Runn is a broad gulf with low shores; when the flood

recedes, during the dry season, it is a Sahara, with no waters but the deceptive lakes of the mirage.

The Indus has a length of over 1850 miles, and transmits an average of 196,000 cubic feet per second to the sea, about 618,000 in the floods, and 40,818 at low water.

The Ganges and the Brahmaputra. — Assam. — The Cholera-breeding Delta. — The Ganges, which is a little longer than the Indus, waters a division peopled by 100 million men, or about one-fifteenth of the entire human family. It is a sacred river. By simply uttering its name reverently a man becomes pure; by washing in its floods he is cleansed from all sin, and future happiness is assured to him if his dead body is borne through its current. In ancient times (and almost down to the present day), legions of corpses floated in its waves. The English have forbidden this practice; and it is only during the night that pious Hindu parents dare now to confide the flesh of their flesh to the holy stream.

The initial torrent, or, at least, the one which the famous pilgrimage-place of Gangotri has consecrated as the mother branch, although its volume does not entitle it to this distinction, is called the Bhagirathi Ganga; it springs, at an altitude of 13,799 feet, from a grotto of ice not far away from Gangotri, in a mass of huge mountains covered with immense snow-fields, and dominated by the giant Kedarnath (22,832 feet). The Alaknanda, the rival of the Bhagirathi, and the true source of the stream, descends from the *massif* of Ibi Gamin (25,529 feet). The two torrents unite at Deo Prayag, or the Divine Confluence, and the Ganges is formed. After a mad course of a few leagues, from precipice to precipice, the Ganges reaches the plains, where the year is one round of summer and spring; this is the garden, the orchard, and the granary of India. On issuing from the mountains at the most holy pilgrimage-place of Hardwar, which is visited yearly by 70,000 fervent worshippers, its altitude is not more than 1020 feet, and it has before it 1250 miles before reaching the Bay of Bengal. It is already a powerful river; a large canal draws from it nearly six-sevenths of its waters, or a mean of 8120 cubic feet per second, for the irrigation of 7000 square miles of territory, along a distance of 310 miles, or as far as Cawnpore. The largest affluent of the Ganges between Hardwar and the Jumna is also a Ganges, namely, the Ram Ganga.

Near Allahabad, the Ganges mingles its turbid waters with the floods of the Jumna, which have passed the palaces of Delhi and Agra. It can readily be believed that this affluent of the Ganges (which is longer than the Ganges itself by 190 miles)¹ was at first a tributary of the Indus; a seemingly boundless plain stretches between the Indus and the Ganges, and more than 75 miles from the Jumna this plain overlooks the bed of the river of Delhi by scarcely 65 feet. The confluence of the two currents is one of the most venerated spots of all India for the Hindus; they flock here by many thousands to wash away their sins in the sacred waters.

Allahabad, which is situated thus near to the junction of the two great rivers, is an important railroad centre, and it is at the same time the most natural location for the metropolis of the Anglo-Indian empire. From this point the Ganges is very powerful, in spite of the large draughts made upon it by the canals in its upper branches. It skirts fields of rice, indigo, sugar-cane, and cotton; it passes Benares, another holy city, to which hundreds of thousands of pilgrims repair every year to bathe in its floods. It receives the Gogra, a broad Himalayan river, which descends from

¹ Having flowed 875 miles, against the 685 of the Ganges.

Nanda Devi (25,666 feet), and the Sone, which originates in the dry mountains of central India, and which is so capricious that it rolls sometimes 600 cubic feet per second and then is swollen by sudden rains to 173,000. Near Patna it is joined by the Baghmata, the Gandak, and the Kosi; these last three are all large Himalayan torrents. Three hundred miles from the sea, the Ganges enters the swamps of a delta of over 30,000 square miles, which it shares in common with the Brahmaputra. Its basin embraces 360,000 square miles.

The Brahmaputra, which collects the waters of mountains as yet unexplored, winds around on the north and then on the west the mountainous districts of Khasia and Garrow (6437 feet); with their eight months of showers, these regions are the most humid in the world. Their mountains were once connected with those of the Deccan, but they were sundered by some means, and the present broad passage was opened. The Brahmaputra, or Son of Brahma, collects the waters of rivers, the largest of which, the Dihong (with a flow of 54,750 cubic feet per second in low waters and 350,000 to 425,000 in the floods), is a prolongation of the Dzangbo, the great torrent of eastern Tibet. It was supposed for a long time that the Burman stream, the Irrawaddy, had as rightful a claim as the Brahmaputra to this Dzangbo as its parent branch; but recent explorations (1885-6), in a region bristling with mountains and cut by gloomy gorges, have shown conclusively that the river of Tibet is connected with the Brahmaputra. Another broad stream, the Dibong, re-enforces the Brahmaputra almost at the same time with the Lohit, or Red River; from this point, at its entrance into Assam, it possesses nearly all its strength. In Assam, the Brahmaputra rarely flows in a single channel; so that one can often form no just idea of the size of the stream. At Gauhati, in one of the passages where the entire volume runs between two banks, it has a breadth of 4951 feet, a depth of 52 to 56, and a mean discharge of at least 530,000 cubic feet per second; the volume of its low waters surpasses 317,500, and that of its highest floods reaches, doubtless, 1,000,000 to 1,240,000. Now, it is 500 miles from Gauhati to the sea, and the tide is not felt there. Between Gauhati and its junction with the Ganges, the Brahmaputra receives very powerful Himalayan rivers, especially the Manas of Bhutan and the Tista of Sikkim. We can then believe that the Brahmaputra is the more powerful of the two streams of the cholera-breeding delta.

Assam is a plain intersected by a multitude of river-beds and *arroyos*, and is excessively hot and humid. The air is heavy and miasmatic; it rains from March to November. During two-thirds of the year, stream, rivers, *arroyos*, and marshes swell and unite in lakes in the low marshes, where herds of rhinoceroses pasture, driven to the fields like oxen; the miry waters overflow the *pothars*, or wet lowlands, where rice grows; they invade the level forests, where the air swarms with mosquitoes, where the swamps are full of leeches, and the mud is infested with creeping batrachians, — here is the retreat of monkeys and jackals, dwarfed boars, bears, buffaloes, tigers, leopards, and wild elephants. As for man, he is still nearly everywhere here in a primitive state; he is known under the various names of Koch, Mikir, Bodo, Khasia, Garrow, Naga, Kuki, Lushai, etc. He comes from various sources; but, whether Tibetans in race, or Indo-Chinese, or Dravidians, the different tribes are becoming gradually cemented together (owing to the immigration of the coolies) into a people which will probably have Bengali, an Aryan tongue, as its idiom.

The delta of the twin streams — the Banga of the Hindus, and our Bengal — has long since ceased to increase on the west and south, owing to a sea-bottom depression,

1300 to 1600 feet deep, called the Great Swatch of No-Ground, 80 miles from the line of the embouchures. There the mire and detritus are engulfed, and, during the inundations, entire islands of mud. This submarine basin, which will not be filled up until some far-off age of the future, receives the arms of the double stream; the Ganges proper, or Padma (literally "the Lotus-Flower"), the eastern branch, mingles with the Brahmaputra; the Bhagirathi, the western arm, draws off the Padma through channels, and, under the name of Hooghly, bathes the stately city of Calcutta. The Hooghly is the commercial Ganges, and will remain such until some change takes place, caused by the upheaval of the deltaic deposits.

The united waters of the Ganges and Brahmaputra reach the Bay of Bengal through an infinitude of miry branches; a great many of these are narrow, tortuous, scant currents, but the Meghna, composed of the Padma and of nearly the whole of the Brahmaputra, is an immense stream, with a discharge of perhaps 1,050,000 cubic feet per second. All these sluggish rivers are sometimes noisily roused by the violent bore. The delta is a maze of islands, where the tiger, the elephant, the rhinoceros, and the leopard rove; a chaos of brackish lakes, of muddy pools, of fluid earth, of fluctuating banks formed by one inundation and destroyed by another, of waste grounds, and of rice-fields. The Sundarbans, on the very shore of the sea, is its swampiest district. Poisons are exhaled from the putrefactions of the delta; cholera had its birth here, and here other terrible maladies may also originate.

The region traversed by the three great streams, the Indus, Ganges, and Brahmaputra, between the almost impassable Himalayas on the north, and the Vindhya Mountains, with their easy cols, on the south, constitutes hot India, or almost a half of the country. The lands incline toward two extremes as regards abundance of vegetation. The extreme of sterility is found in the desert of Thar, near the delta of the Indus. The extreme of fertility, the hot, humid, stormy Delta of Bengal, touches the metropolis, Calcutta. About 170 million men, or three-fifths of the inhabitants of the peninsula, and even something over, live in northern or hot India, though it is less extensive than southern India, or the Deccan.

The Deccan: The Ghauts.—The Deccan,¹ or triangular southern India, stretches south of the Tropic of Cancer, and its terminating point even approaches very near the equator. It is, nevertheless, not as hot here, on the average, as in Gangetic India; compared with the latter, the Deccan is temperate, except along the slender coast-margin, where the tropical heat is augmented rather than diminished by the sea-winds. It is a plateau, 1000 to 3000 feet in altitude, composed chiefly of gneiss, and overlaid with very deep strata of basalt;² the volcanic rocks and ashes cover fully 115,000 square miles, or even 200,000, if we consider the Central Provinces as belonging to the Deccan. Its situation entitles it to the name of Balaghaut, a term often applied to it in India, and which signifies, on the Ghauts,—in opposition to Payinghaut, the coast region, under the Ghauts. As for the word Ghauts, it means "landing-stairs"; and, in fact, seen from the Concan seaboard, this chain rises in terraces from the narrow littoral to the western rim of the plateau.

The Deccan is for the most part very dry, for the Ghauts shut out the moisture brought by the monsoons; at Punai, for example, the annual rainfall does not exceed 24 inches, while on the maritime slopes of Malabar, where forests of teak, sandal,

¹ Deccan is the corruption of *Dakshina Patha*, signifying the southern or right-hand country, the country on the right when one faces the rising sun.

² From 650 to 1600, and even 3200 feet thick.

and ebony abound, from 13 to 23 feet of water is received annually. The Deccan is nearly everywhere stripped of its woods; it has a gray, red, or yellowish soil, and a monotonously rolling surface; despoiled by man as well as by nature, it no longer possesses its virgin beauty, and it has lost the spectacle of volcanic illuminations. Its furnaces are all extinct. It is thought that the most formidable of these smoked and flamed in the west, between Nasik and Punai, above the sands where Bombay now carries on commerce with all the traffickers of the earth.

The Deccan is supported by various mountains. In the north rise the Vindhya, which are neither lofty nor bold, having as a culminating point a summit of 2330 feet. Not only the Deccan, but the domain of the Dravidian idioms, terminates with this long range, which is skirted on the south by the Narbada River. Beyond the Vindhya, chains and masses, sometimes mountains, like the Aravali (5653 feet), sometimes hills, stretch away to be lost in the burning waste of Thar; or again they form mountains like those of Bundelkhand, which are composed of very old gneiss, and terminate on the plains of the Jumna and the Ganges. Running parallel to the Vindhya, between the Narbada and the Tapti, are the Satpuras, in which the Mahadeva hills (Great God)¹ reach an altitude of 4511 feet.

We must not look for the chief summits of the Deccan in these northern flanks and bastions, but quite to the contrary, far away to the south, among the gneisses and porphyries which end in Cape Comorin — or, rather, which seem to end there, for they are continued under the waves, and beyond in the mountains of Ceylon. Aneimudi (the row of the Elephants), in the *massif* of the Elephants or the Anamullay Hills, reaches a height of 8835 feet; and, in the Blue Mountains, or Neilgherries, which are separated from the Anamullays by the Palghaut, Dodabetta, or Grand Mountain, attains an altitude of 8701 feet. The Palghaut is a gap, at the most not over 427 feet above the sea,² leading from the Malabar Coast to the broad plains of the Cauvery, which descend imperceptibly toward the Coromandel Coast.

Aneimudi and Dodabetta belong to the Western Ghats, which are composed of lava, and are much lashed by the rains: the latter overlook the shores of the Arabian Sea for 800 miles, between Cape Comorin and the embouchure of the Tapti in the Gulf of Cambay. Except in the southern gneisses and porphyries, the Western Ghats rise to only very modest heights, — 3300 feet on the average, with summits varying between 1600 and 4600. The Eastern Ghats extend along the coast of the Bay of Bengal, from the left bank of the Cauvery to the poisonous mire of the Gangetic delta; they are still lower than the western chain, scarcely reaching an elevation of 1600 feet on the average. They command the low valleys of the Deccan streams, whose sources are sheltered by the Western Ghats.

The Deccan streams are the Mahanadi, the Godavari, the Kistna, the Cauvery, the Narbada, and the Tapti; the last two are tributaries of the Arabian Sea. The Mahanadi, the Narbada, and the Tapti terminate outside of the Deccan, not in Dravidian but in Aryan territory.

The Mahanadi, in other words the Grand River, has a course of 513 miles in a basin of 38,500 square miles; it empties into the sea with other coastal torrents through the channels of a delta of 5000 square miles. It is an exceedingly fluctuat-

¹ The Mahadevas, superb hills with a very great variety of rocks, are consecrated to Siva.

² This remarkable gap, which gives passage to a railroad running from Beypur across the country to Madras, is 25 miles broad. According to statistics furnished by the Government of India, it is 1500 feet above sea-level at its highest point. — Ed.

ing river, discharging during the droughts not over 1095 cubic feet per second ; but this volume is swollen by the monsoons to 1,750,000. An attempt has been made to regulate the stream, where it issues from the mountains, by three dikes, which store sufficient water to irrigate 1250 square miles of territory. Orissa, which it traverses before reaching the ocean, has thousands of sanctuaries, dedicated to all the gods of India, and places of pilgrimage for all the fanatics of every faith ; it is in this division that Jagannath is situated, where 4200 priests drag for days and days along the sandy beach an enormous chariot bearing a wooden pagoda consecrated to Vishnu ; and now and then some enthusiast casts himself under the sacred wheels.

The Godavari, in its course of 900 miles, gathers the streams of a basin of more



CASHMERE FARMERS.

than 115,000 square miles. It enters the Bay of Bengal through a delta of 15,000 square miles. Rising on the extreme western rim of the plateau, not far from Bombay, this stream, the flow of which varies between 210 and 141,000 cubic feet per second, pierces the Eastern Ghauts by a gorge where the imprisoned waters have a depth of 120 feet in dry weather and 220 in the floods, or, perhaps, even 320 in the narrowest parts. A project has been set on foot for damming one of the rivers of its basin, the Kanhan, in the division of Nagpur, for the irrigation of 620 square miles of territory.

The Kistna, or Krishna, with a length of nearly 800 miles, in a basin of more than 93,000 square miles, rises still nearer the shores of Bombay than the Godavari does.

It is as capricious as the other streams of the Deccan, sometimes yielding only 1130 cubic feet per second, while it is capable of carrying 1,188,000. In the floods, it presents a magnificent spectacle where the water, in the descent from the plateau, drops 407 feet in 3 miles of length. In one portion of its course, a dam or anicut sets back a sufficient amount of water to irrigate 1550 square miles.

The Cauvery, between the Malabar¹ Coast, on the west, and the Coromandel, on the east, is unrivalled in southern India. Reaching the margin of the plateaus of Mysore, the falls of Sivasamudram, or Sea of Siva, precipitate it nearly 325 feet into a low valley, which is followed by a broad plain and then a broad delta. Through various mouths it discharges into the sea 17,500 cubic feet per second at low water and 475,000 in the great floods,—the tribute gathered in a course of 475 miles, from a basin of over 30,000 square miles. The Cauvery is less violent than the other rivers of the Deccan. This greater tranquillity is due in a measure to the numberless irrigation tanks in its basin; there are more than 37,000 of these in the single division of Mysore, and 63,000, it is said, in the province of Madras. At present, there are 40,000 square miles in British India watered by river derivations, or by storage reservoirs.

The graceful Narbada, issuing from the plateau of Amarkantak (3327 feet), flows westerly, without any considerable curves, for 800 miles. It is this river which passes (beyond a cataract of 26 to 30 feet) through the wonderful gorge of the Marble Rocks, near Jabalpur. Here, in its upper valley, where it is as yet not more than 65 feet broad, it runs swiftly for about 2 miles between sparkling white marble walls 100 feet high, with no woods,—not a tree, not a patch of grass; nothing but pure marble reflected in clear water. The mountains along the Narbada, now almost naked, after having been once splendidly clothed with trees of inestimable value, such as the teak and the saul, send down extraordinary torrents when the monsoons blow; and the current of the Marble Rocks, which is very insignificant in dry weather, carries during the monsoons 2,493,000 cubic feet per second. The Narbada has neither the breadth of the Ganges, nor a drainage basin capable of supporting more than 100 million men; but its sanctity surpasses even the sanctity of the stream of Benares.

The Tapti, the stream of Surat, runs parallel to the Narbada on the south; it is much shorter than the Narbada, and has a smaller basin; it empties, like the latter, into the Gulf of Cambay (which both streams are filling up with deposits). It sometimes rises to 897,000 cubic feet per second, but shrinks in the rainless season to 175 or 200.

Such is the Deccan, inhabited by 114 million men, or nearly two-fifths of the people of India.

Climate.—All sorts of climate are to be found in India. In the Himalayas it is frigid; in the middle mountains warm or temperate; in Bengal, along the Ganges and on the coasts, it is tropical; while in the desert of Thar, and northward, in the Punjab, we encounter a Saharan climate. But in these last two regions the atrocious heat, which reaches 110°, 120°, or 125° F. in the shade, is compensated for by low temperatures, which even sink to the freezing point at times; and the annual mean is not as high as that of Madras, for example, where the mercury rises to only 108.5°, but where it never falls below 62.6°. In the Himalayas, the Aravali, Vindhya, Satpuras, and Ghauts, the altitude of the cities makes them cool. Utakamand, a station in the Neilgherries, has a yearly mean of 55.9°; while not far away, in the lower plains, Trichinopoly records an average for the twelve months of 84.7°.

¹ Corruption of Malyavar, "Numerous Mountains."

This land of flaming suns is visited by the heaviest and blackest of showers. The monsoon, which prevails from June to September, bears on its wings a never-ending succession of clouds; the entire Indian territory has not, however, the same share in this beneficent deluge. In many vast districts which are barred from the seas by sierras it almost never rains. At Cape Comorin, the southern point of the peninsula, the yearly rainfall is about 36 inches; the Deccan, which receives only the clouds rent in the passage of the Ghauts, absorbs here a foot and a half, there three feet, and elsewhere from seven to ten; while on the maritime slope of the western Ghauts the annual fall sometimes surpasses 23 feet, in the neighborhood of Bombay. In another chain, the famous station of Cherrapoonjee, where ordinarily the fall is over 625 inches, registered in 1861 a total of 805 inches.

The Aryans. — Sanskrit, Pali; Urdu. — Dravidian Idioms. — In prehistoric times, India was inhabited by Blacks or Negroids, some representatives of whom still exist in the mountains of central India and the Deccan; as, for example, the Bhils, who number over a million, the Todas, who are reduced to a few hundreds, and the Gonds, who have made some advances in civilization. These indigenous races were succeeded by the Dravidians, or Dravinians, peoples now inhabiting southern India, and speaking languages which are essentially different from those of northern India. The Dravidians may have entered India from Tibet by way of the Brahmaputra; but they were more probably from the plateau of Iran, where the Brahoes of Beluchistan still make use of an idiom kindred to the Dravidian tongues. Later, tribes, supposed to have been from Turan, arrived by the Kabul pass; they settled in the Indus region, and from them the Jats originated.¹ These conquerors were in turn subdued by a people of Aryan lineage, who came from some section of north-western Asia. The Aryans, who were destined to remodel India, had severed themselves, about the year 2000 B.C., from their Iranian brothers, and then had reached the threshold of the country of the Indus and the Ganges through the Kabul valley. They were doubtless few in number, but they must certainly have had the superiority in arms; they spoke a magnificent language, which rang out in fervent hymns in honor of their young gods. Like the Conquistadores who levelled enormous empires, the Aryans seized sub-Himalayan India, and swept southward, over the multitude of aborigines, over Turanians, or Jats, and the various Dravidian nations.

These conquerors did not exterminate the vanquished; and the latter, in the course of time, made their way into the conquering race. The white visage of the Aryans (if they were, in fact, Whites) became brown, or almost copper-colored; but the supple and sonorous tongue of the invaders, their religion, their ideas, and their institutions, gradually gained a complete conquest over the country of the Indus and Ganges; as for the Deccan, it maintained almost everywhere its races and its idioms. Before the times of Alexander, opulent cities flourished on both streams; these cities were inhabited by men much addicted to ritual and mysticism, and speaking a most beautiful language. This rich, strong, and elegant tongue, the Sanskrit, possesses two great epics, the Mahābhārata and the Rāmāyana, poems of a hundred thousand and more lines, pregnant with marvellous verse. The religion of Brahma, which now trembles in its decrepitude, was then in the flower of its youth.

¹ The Jats constitute at present nearly a half of the population of the Punjab. They possess traditions that point to an immigration from Kandahar or Ghazni, but they are identified with the Getae. Many eminent scholars now insist on their Scythic origin, basing this view on evidence derived from local investigations, and from Sanskrit literature. — Ed.

Five hundred and sixty years before the Christian era, a man of royal blood, born at the foot of the mountains of Nepal, and designated as Sakya-sinha, or "the lion of the Sakyas," abandoned the ascetic life which he had adopted, and, under the name of Sakya-muni, the Sakya-saint, stood forth as the deliverer of a priest-ridden, caste-ridden nation. His teachings became a religion, which took the title of Buddhism, from Buddha (the "enlightened"), the name which admiring neophytes had bestowed upon its founder; this religion is to-day very widely diffused, though much distorted from its original simplicity, both in the exegesis of its doctrines and in its priestly rites. It has degenerated into a collection of formulas and a muttering of prayers. In the seventh, eighth, and ninth centuries of the present era, Buddhism gradually declined in India, and this most widely professed of all religions¹ no longer has its *point d'appui* in the land of the Ganges. Some hundreds of millions of men profess it in Nepal, Tibet, Ceylon, Indo-China, China, Mongolia, Manchuria, and Japan, in central Asia, in the *tundras* of Siberia, and as far as the banks of the Volga. Pali retreated from India at the same time with the Buddhists, who prayed and sang in this language; but, having had the honor of bearing the parables and teachings of the holy preacher to the ears of the peoples, this idiom of a country of the lower Ganges remained the sacred language of Buddhism. And to-day numberless priests ignorantly stammer it in the temples, chapels, and cloisters of the greater part of Asia. The liturgy, which is about 2500 years old, contains remnants of a tongue still more ancient than Pali; these fragments are from the Sanskrit, which Buddhist monks and priests understand still less than they do the language of their ritual.

As for Sanskrit, it is the religious tongue of the Brahmanists, and the subject of constant study by the Brahmans or priests of Brahma. It is also to India what Latin was to Europe in the Middle Ages, namely, the medium of communication between the lettered, and the aristocracy. Pali originally bore the same relation to Sanskrit that a clownish patois does to the polished language employed by kings, prelates, judges, writers, and poets. However, Sanskrit became extinct before the idioms known as Prakrit ("derived," or "natural, common," forms of speech), and the latter yet survive under various names.

After the appearance of Buddha, and before the conquests of Alexander the Great, the Hindu Aryan, who had become crossed with yellow and black elements, and who was already very unworthy to be called white, seems to have been enervated by the climate. With the proverb he said, "It is better to sit than to stand, better to recline than to sit, and death is more to be desired than sleep."

Islamism, which stirred anterior Asia, Egypt, northern Africa, and Europe for several centuries, to their very foundations, had not sufficient force to conquer India as it had conquered Persia and Syria, the Nile-lands and the Moghreb, Sicily and Iberia; but, from the ninth century on, the Aryan country often witnessed the descent from the plateaus of Iran or of Beluchistan, by way of Kabul, of Mohammedan invaders belonging more or less to the Iranian, the Arabian, and the Turanian races; these included Afghans, Brahoes and Beluches, Persians, Turks, and Arabs. These Mussulmans mingled with the Aryans, and made the north-west of the peninsula much more Mussulman than Brahmanist. In the sixteenth century, a descendant of Tamerlane founded the celebrated Mohammedan empire of Delhi, the marvels of which

¹ For the distribution of the different religions among mankind, see page 14. Professor Max Müller, *Chips from a German Workshop*, I. p. 214, places the number of Buddhists at about 455 million. — Ed.

were the talk of Europe. The empire of the Great Mogul disappeared in its turn. Then came the Portuguese, the Dutch, and the French, and finally England gained the supremacy in India; at present, almost everything which the English do not possess here directly belongs to them in fact, under a false covering of autonömy.



BOMBAY COTTON MARKET.

It is necessary to distinguish between the races of northern India and those of the Deccan. In northern India the so-called Aryan stock had its part in the formation of the peoples now living on the Ganges, the Brahmaputra, and the Indus. It was not, however, the preponderating constituent, for it was almost submerged in a sea of other

elements, embracing the Persian, Afghan, and modern European, as well as the Arabic, and such heterogeneous elements as the blood of the Dravidians, Tibetans, Turanians, and Mongols, and especially of the black autochthonous races. In the Deccan, where the Aryans penetrated but slightly, and to which the invaders who so often overran the sub-Himalayan plains seldom climbed, the inhabitants have remained more or less what they were after the black aborigines had been mixed with the yellow race. As for the modern Aryans (as the term is now understood), they do not reach even the humble ratio of one in a thousand. The number of British-born subjects, according to the census of 1881, was 89,798. The total at present is only 158,000, including the army. They administer the government, they carry on business and banking affairs, run the factories, and superintend the plantations where tea, cotton, and all sorts of revenue-producing plants are grown. They have not created here, as the Spaniards and Portuguese have done in America, a powerful race, intermediate between the conquerors and the conquered. The English Eurasians, or half-castes, are not numerous in Hindustan; their fathers despise them, while, on the other hand, they hate their fathers and scorn their mothers; and nothing binds them to England any more than to India. They are vain and indolent, and seek easy employment as office clerks. The French Eurasians are a better class physically and morally, and some of their women are very graceful; the Portuguese Eurasians are bronzed or even black; they are not afraid of manual labor. All these cross-breeds together number perhaps less than 500,000.

The language now most used in India is not English, but Urdu or Hindustani, a dialect of the Hindi. The name Urdu, which is a Mongolian word, signifying camp, recalls the origin of this dialect. In the *urdu*, or camp, that is, in the palace of the Great Mogul, at Delhi, three languages were spoken, namely, Mongolian, the maternal tongue of the dynasty, Persian, the literary and polite tongue of Asia, and Arabic, the religious tongue of the Mohammedans. By infiltrations into the Prakrit Hindi, the speech of the country, these three idioms produced Urdu. Later, Urdu became the language of the princes and lords, of soldiers and bureaucrats, of diplomats and the court, — the tongue by which all the government machinery was directed. Later still, the English had recourse to Urdu to conduct their relations with their subjects in the great polyglot empire which they had won from the emperors of Delhi. At present, Hindi is spoken by more than 110 million men, in 80 dialects; Urdu is gradually losing ground, as is also Persian, which has been preciousy cherished down to the present day among the upper classes of Mussulman India.

The Aryan languages of India are spoken by 225 million men, from the rim of the Iranian mountains to the Indo-Chinese coast, and from the Himalayas southward to a line which would touch the western coast beyond Goa and the eastern beyond Ganjam. They include Hindi, which is the most wide-spread of all the idioms, and which is the *lingua franca* of the Brahmanists (the Mohammedans make use of Urdu); Bengali, which is used by 40 million men in Bengal; Mahratti, the ruling speech in the north-west of the Deccan; Punjabi and Sindhi, which are spoken on the Panjnad and on the lower Indus; Marwari, employed in the desert of Thar; Guzerati, which is heard in Guzerat; and Oriya, the vernacular of Orissa.

The Dravidian tongues of the Deccan are totally foreign to Sanskrit and the languages which have been derived from it by the introduction of various elements; they are said to be remotely related to idioms of northern Asia, notably to Ostiak.



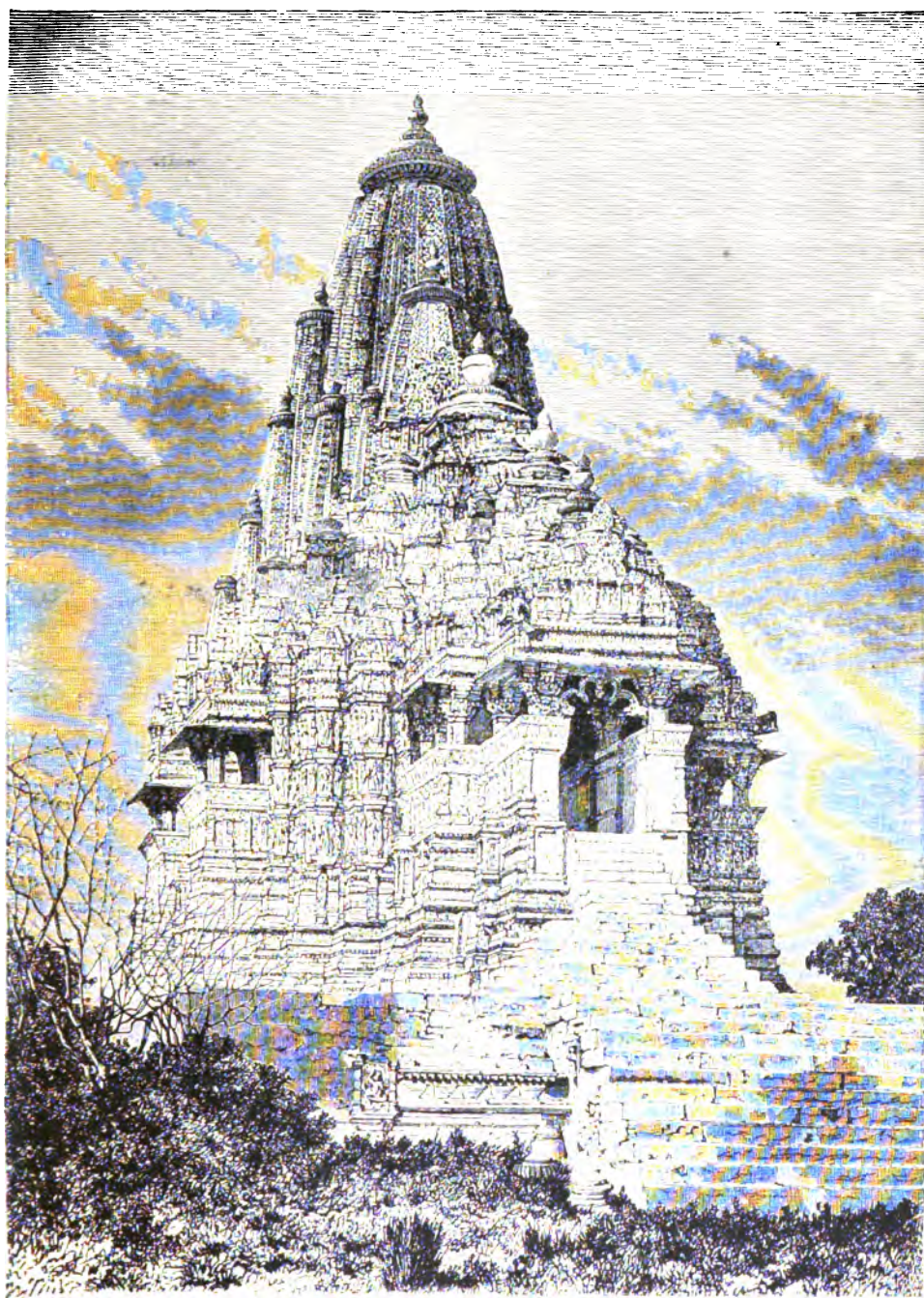
A STREET SCENE IN DELHI.

Telंगा, or Telugu, is an extremely soft, harmonious dialect, in use by 16 million people living on the Godavari and the Kistna, in the eastern half of their courses, and along the northern Pennar. It is retreating before the advance of Tamul, or Tamil, which is spoken by 15 million Dravidians in Madras, Pondicherry, and Karikal, and also in the north of the island of Ceylon; Tamil, which is incredibly rich and flexible, at the same time sweet and vigorous, passes for the "Dravidian Sanskrit." Six million men in the upper basin of the Kistna, along the western borders of the Telugu-speaking inhabitants, make use of Canarese. Malayalam is employed by 3 or 4 million persons on the Malabar seaboard, west of the Tamil dialect. Including Tulu and other slightly diffused idioms, there are very nearly 50 million Dravidians who will in the end, it is thought, all speak Tamil or Telugu, for the lesser tongues are disappearing here also. Possibly, Tamil will finally be the sole surviving language.

English, which is understood by 6 million people, owes its great influence to the fact that it is the idiom of high society, of politics, and of the principal newspapers; it can never hope to supplant Hindi, which is spoken by as many men as there are Englishmen in the whole world.

Religions and Castes. — With the exception of about fifty million Mussulmans and six million Buddhists and Christians, India professes Brahmanism, the religion of its old hymns and its great epics. Brahma is worshipped here as the self-existent being, whose throne crowns the fabled heights of Maha Meru, the centre of the earth, and the pretended source of the Indus and the Ganges. The three deities, Brahma, Vishnu, and Siva represent in the Brahmanical system a triple impersonation of the divinity, as manifesting itself respectively in the creation, preservation, and destruction of the universe. Siva, the destroyer, is the Great God (Mahadeva), and the one most extensively worshipped. Then follow Kali, the goddess of death, Indra, Krishna, whom the shepherds invoke, Rama, etc. The inferior gods and demons are countless. Animals, in which divinity is often incarnated, and in which the spirits of the dead take refuge, are more respected and loved by the Hindus than are their human brothers; the cow, for instance, is highly venerated. There are, or there have been, in India, hospitals for aged and infirm animals; disregard for the lower orders of being is an abomination to the Hindus, and they call Europe the "animals' hell."

While the brute creation is thus respected and cared for, a stern hierarchy has long parcelled off mankind into castes, of which the higher despise the lower, and the lower envy and hate the higher. These caste divisions are less rigid now than formerly. The upper caste, that of the Brahmans, or priests of Brahma, represents more perfectly than any other the ancient Aryans; yet, notwithstanding sacerdotal exclusiveness and pride of race, the Brahmans are much mixed. They look down haughtily on the *Kshatriyas*. The *Kshatriyas*, the military caste, were originally composed of the Aryans who conquered the country. These were destroyed by the Brahmans themselves, at a period which was fatal to the white race in India; they were superseded by the non-Aryan, Turanian Jats, who were likewise warriors; later on, this second caste welcomed the Rajputs to its ranks — still other warriors, whose precise origin is unknown to us, but who were apparently from the Aryan trunk. The descendants of these last conquerors, who entered India through the Kabul pass about the fourth century after Christ, gave their name to Rajputana, a country occupying the terminal bastions of central India above the desert of Thar and the plains of Agra; the Rajputs are the most manly of the inhabitants of India (with the Sikhs of the Punjab), but they are so much scattered in the bosom of their old conquests



THE TEMPLE OF MAHADEVA AT KAJRAHA.

that they have lost all cohesion and power. The Kshatriyas, in their turn, have no esteem for the *Vaisyas*, the caste in which Turanian blood predominates. These *Vaisyas* are shopkeepers and landed proprietors; they form the lowest class of the nobility; below them come the descendants of the autochthonous Blacks, or Negroids, and the pre-Aryan invaders who formed alliances with them, namely, the *Sudras*, who are the navvies, laborers, and servants of the country. Lastly, the *Sudras* themselves look down contemptuously on the swarm of out-castes.

This is the classical division into castes, but, in reality, the descending scale is as follows: Brahmans, cultivators, merchants, and manufacturers or craftsmen; and every caste is divided into an infinitude of sub-castes and infra-sub-castes, each corresponding to a group, a profession, or to social distinctions, which are oftenest the result, on the one hand, of an ancient conquest, and, on the other, of an ancient subjection. Below the last of the lowest infra-sub-castes is the multitude of out-castes.

This monstrous monument is tottering. The fifty million Mussulmans, who constitute about a sixth of the inhabitants of India, do not recognize caste divisions, and among the Hindus themselves these are daily losing somewhat of their Draconian rigor.

Cities. — India is composed of 8 provinces under direct British administration, and about 150 feudatory states and principalities; it contains a large number of towns of more than 100,000 inhabitants.

Calcutta is the capital of the province of Bengal, as well as of all India, and it is the residence of the British viceroy. It is built on the Hooghly, an arm of the Ganges, 80 miles from the Bay of Bengal. It owes its high fortune to England. Before the British conquest of India there was nothing but an uninhabited swamp on the site where at present stands a city of 840,000 souls (suburbs included). Its wealthy quarter, which is very airy and brilliant, entitles it to be called the City of Palaces, but the terribly hot sun and the filthy, stagnant waters accomplish such a work of death here that the town may be said to merit equally the native name *Kali Kota* (the city of the cruel goddess *Kali*), from which the English name is derived, and the title of *Golgotha*, derisively bestowed upon it by the English. During certain months, it is impossible for Europeans to live in Calcutta; the government, all distinguished personages, and the wealthy English take refuge then in the summer capital, *Simla*; this charming health-resort is situated in the Himalayas, at an elevation of 7087 feet, between the *Sutlej* and the *Jumna*; that is, between the basins of the *Indus* and the *Ganges*. — The old capital of Bengal, *Murshidabad*, on the *Bhagirathi* arm of the *Ganges*, was once larger than the *Paris* of to-day. It is surrounded by a wall over 30 miles in length; it contained a population of 165,000 as late as 1815. Fifty years have sufficed to convert it into an abandoned provincial town. — *Ganda*, another old metropolis of Bengal, likewise reared its walls in the delta between the two large streams; its ruins cover from 42 to 46 square miles.

Bombay (804,500), for *Mumbai* (its real name), has inherited the commerce of *Surat*; it occupies a small, sandy, and basaltic coast-island, at the foot of the *Western Ghats*. It is the capital of the province of the same name, and is one of the busiest seaports in the world. Like its rival, *Calcutta*, which it counts on eclipsing one day, *Bombay* is not deeply rooted in the soil. It does not date farther back than 1661. The city was formerly so unhealthful for the European as to give rise to the saying: "Two monsoons at *Bombay* constitute the life of a man." In the very hot season, *Bombay* ceases to be the capital of its province; and the government

authorities betake themselves to Punai, a city of 130,000 souls, in the Deccan, located at an altitude of 1847 feet, at the confluence of two rivers of the Kistna basin. Punai is inhabited by Mahrattas, people of Aryan tongue, who were marching to the conquest of India when suddenly the English set vanquishers and vanquished in accord by confiscating both of them. Elephanta, an island near Bombay, is famous for its beautiful sacred grottos, which contain sculptures of gods, men, animals, imaginary beasts, trees, and fabled plants. These cave-temples are from nine to twelve hundred years old.

Madras, on the Coromandel Coast, densely shaded by graceful cocoanut-trees, contains 450,000 inhabitants; hardly a worse landing-place is known than that offered by the rigid shore of this capital of the province of Madras.

Haidarabad (393,000), the principal city of the Deccan, on one of the left affluents of the Kistna, is not far from Golconda, where so many diamonds were once cut and sold that the town became proverbial for its precious stones.

Lucknow (273,000) lies along the Gumti, a tributary of the Ganges. It is a young city for India, having been founded in the sixteenth century. This old capital of the old kingdom of Oudh lies in the most essentially Hindu region of India; the inhabitants speak the best Hindustani. It is the centre of the arts, and rises in the bosom of exuberant fields.

Benares (222,000), the most holy city of the Hindus, stretches along the Ganges in the form of a crescent; it boasts of its 1700 pagodas, its 40,000 Brahmans and fakirs, and the saving power of its stream, which is visited by multitudes of pilgrims.

Gwalior (100,000 [?]), south of Agra, on a torrent belonging to the basin of the Jumna, is called the Gibraltar of India, on account of its fortress, which is



A NATIVE OF MADRAS.

stationed on a steep, almost perpendicular sandstone hill, more than 300 feet above the plain.

On the Jumna, not very far away from the sands of Thar, stands Delhi (193,500); this was the chief of the royal residences under the Great Mogul. No known city has been so often destroyed only to be built again. In remote antiquity it occupied a high rank in India, under the name of Indraprastha, or the plain of Indra. Modern Delhi is only 250 years old. It was founded by the Shah Jahan; whence its other name (now rarely heard) of Shahjahanabad. Superb monuments, imposing ruins, and heaps of rubbish have been successively piled up here for twenty-five centuries; the 45 square miles where Delhi passed from Indraprastha to Shahjahanabad are a museum of all forms of Hindu art, — from the most primitive down to the happy style of architecture produced by the alliance of the genius of India with the genius of Mussulman Persia.

Patna (171,000) borders the Ganges for about 12 miles, in the midst of poppy-fields. It has large opium-factories.

Agra (165,000), on the Jumna, is only three centuries old; and yet, in the days of the great Akbar, it was a magnificent capital. Some of the noblest monuments of India, its forts, palaces, mosques, mausoleums, and triumphal arches, are to be found here; the town also contains vast ruins.

Bangalore (180,000), in the southern Deccan, is situated 3032 feet above the seas, on the Mysore plateau.

Amritsar — literally, "Fount of Immortality" (136,500) — lies on a canal of the river Ravi. It is the religious metropolis of the Sikhs, a sect founded in the fifteenth century by a revelator who preached the unity of the Godhead pantheistically. The town derives its appellation from a sacred tank or reservoir, in which there is a temple of the Sikhs. The Sikhs made a long and valiant struggle against the British; but to-day they furnish, with the Gorkhas of Nepal, England's most desirable mercenaries.

Cawnpore (182,000), a new city on the Ganges, is indebted for its renown to the memories of the revolt of 1857, when the British barely escaped losing India.

Lahore (178,000), the capital of the Punjab, on the Ravi, exhibits a few monuments contemporary with the rule of the blood-stained emperors of Delhi.

Allahabad (178,000), that is, the "City of God," the capital of the North-West Provinces, faces the plains where the Ganges and Jumna unite.

Jaipur (143,000) is on the Banas; this sub-affluent of the Ganges issues from the region of Udaipur, a city whose rajahs, the most renowned of the Rajputa potentates, scorned to give their daughters to the plebeian called the Great Mogul.

Cashmere, or Srinagar, "The City of the Sun" (120,340), was the summer residence of the Great Mogul. It is located in a region famous for its mild climate, its girdle of snow-clad mountains, its lakes, and the valley through which the Jhelum winds. It is built at an elevation of 5233 feet, on canals of this ancient *Hydaspes*, and may be called "The Eastern Venice." Gigantic plane-trees, poplars, elms, and walnuts overhang palaces and villas, the views from which are sublime when one contemplates the massive giants of the earth, and enchanting when one looks down into the vale which Hindu, Persian, and Arab poets have named nature's masterpiece.

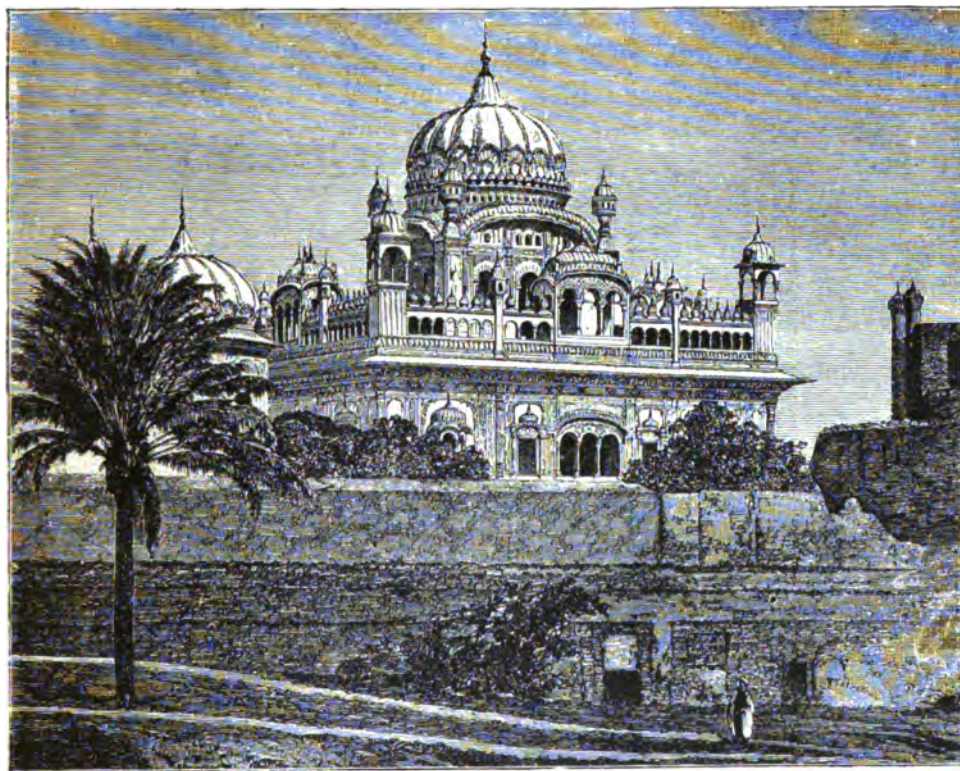
Monumental Ahmedabad (146,000), which has declined greatly since the seventeenth century, stands on the banks of a tributary of the Gulf of Cambay. It is the capital of Guzerat, a district abounding in superb temples raised by the Jains, a sect

of non-conformists to the Brahmanical system of Hinduism, — a sect which rears more temples than any other in India.

Bareilly (122,000), between the upper Ganges and the Himalayas, has lost much of its grandeur.

Surat has a population of 108,000. The inhabitants numbered 800,000 in the days of its renown, when it was one of the most commercial and luxurious of the cities of India. It is on the river Tapti, 18 or 19 miles from the western sea; the stream is, however, of little value to the city, for navigation is obstructed by a bar.

Baroda (116,000) is the residence of the *gaikwar* of Baroda, a despot chief who



THE PALACE OF LAHORE.

calls himself independent, but who is under the political superintendence of the government of Bombay; Baroda borders the Visvamisra, not far from the Gulf of Cambay.

Independent States. — The only independent states possessing any considerable power are Nepal and Bhutan, which occupy the southern slopes of the Himalayas; the first lies north of the Ganges, the second north of the Brahmaputra.

Nepal. — Nepal embraces about 58,000 square miles. It is much longer than broad, and stretches from the low and feverish Tarai to the summits of the principal Himalayan peaks. Within these narrow limits it possesses all kinds of climate and all kinds of scenery. The population is estimated at 3 million, comprising Hindus, in the west, Tibetans, in the centre, and cross-breeds of these two races; the Hindus are

Brahmanists and the Tibetans Buddhists. Hindi is tending toward becoming the universal language; but various other idioms are still spoken here, the principal of which is Newari; this tongue is related to the Tibetan, and is consequently monosyllabic in character. Khatmandu (pop. 75,000), the capital, 4354 feet above sea-level, is a museum of beautiful and curious edifices.

Sikkim and Bhutan. — Bhutan lies east of Nepal, and is separated from it by Sikkim, a small division, of 2550 square miles, which receives perennial supplies of water from Mount Kinchinjinga. If there were no glaciers here, the torrents would still be mighty streams owing to the abundant rains which are driven by the monsoons against the lofty, forest-covered mountains. Sikkim has a population of 60,000 men, who are of Tibetan race. Its chief city is Darjeling, a health-resort, at an altitude of 6500 feet.

Bhutan covers something over 13,500 square miles. Its inhabitants, numbering, perhaps, 100,000, are Tibetan, as the name of the country indicates. Bhutan signifies "End of Bhut or Bod"; and Bod is the designation both of Tibet and the Tibetans. Bhutan is backed against the Himalaya Mountains, which rear the points of Shumalari and other peaks 23,000 to 25,000 feet in altitude. Like Sikkim, Bhutan sends powerful torrents into the Brahmaputra. The metropolis is called Tassisudon, "Holy Citadel of the Faith."

Portuguese India. — Portuguese India, the insignificant remnant of the conquests of Albuquerque "the Great," and of many other famed Lusitanian captains, now embraces less than 1300 square miles, with 550,000 inhabitants.

Villa Nova de Goa (pop. 17,000), called by the natives Panjim, is situated five miles from the ocean, on the estuary of a stream rising in the Western Ghats, nearly at the point where the seaboard takes the name of the Malabar Coast. It succeeded Old Goa, surnamed the Golden, as capital of Portuguese India. It once contained 200,000 inhabitants, whose dwellings were grouped around a palace of the Inquisition. In its flourishing period, the city occupied the rank which Bombay holds to-day. Diu (pop. 13,000), on the coast of Guzerat, supplies Portuguese Mozambique with laborers, or coolies, as they are generally called; the term coolie is possibly derived from the Koli, a people of this same Guzerat. North of Bombay are the ruins of Bassein, once a Portuguese city of 60,000 souls; the tomb of the hero Albuquerque is hidden under the briars overgrowing these ruins.

French India. — French India now comprises about 200 square miles, with 283,000 Hindu and Mussulman inhabitants and a few Christians; it embraces five cities or villages, which France is not allowed to arm for war.

Pondicherry, the capital, near the 12th parallel of latitude, has a population of 173,000, including all the villages on an area of 113 square miles, a territory composed of fragments of land scattered through the British domain. Its true name is Pudukcheri (New-burg) in the Tamil tongue, which predominates here, not, however, to the exclusion of French, which is spoken with a pure accent by a great many of the natives. The city is built along a straight beach on the Coromandel Coast; it has no port, and, we might almost say, no roadstead. It is never visited by the cyclones which are so frequent on this coast. — Karikal, near the 11th parallel, also on the Coromandel Coast, controls 52 square miles, with 109 villages, which are occupied by 70,500 Tamil-speaking inhabitants. It is on the Arsalar, a delta-branch of the Cauvery. — Yanaon, on the Godavari, seven miles from the Bay of Bengal, is a town of Telugu speech. The 5500 inhabitants occupy $5\frac{1}{2}$ square miles, between the 16th and

17th parallels of latitude. The climate is heavy and humid, and the coast regions are subject to typhoons. — Chandernagar, 15 miles from Calcutta, is outside of Dravidian territory, on Aryan soil; it in reality bears the Bengali name of Chandranagar, meaning "City of the Moon," or possibly that of Chandananagar, "Sandal-wood City." It is situated on the Hooghly, the same river-arm on which Calcutta is built; the stream is navigable up to this point for vessels drawing less than 10 feet of water. The



COCOANUT-TREES IN CEYLON.

"City of the Moon" commands 2½ square miles, and has a population of 24,000 souls, the remnant of the 100,000 existing at the time when the French ruled in India; it is a charming town, shaded by beautiful trees. Chandernagar is the only extra-Dravidian town in French India. — Malayalam is spoken at Mahé, a miry port on the Malabar Coast, containing, with four adjacent villages, 8500 inhabitants, on about 25 square miles.

Ceylon. — The pear-shaped island of Ceylon,¹ embracing 25,364 square miles, faces the southern Deccan across Palk Strait and the Gulf of Manaar; both these waters

¹ Corruption of Sinhala (dvīpa), "island of the Lions." (See Tennent's *Ceylon*, I. p. 549 n. 1. — Ed.)

bathe rocks and sands where pearl-fisheries are carried on in the spring. The sea between the island and the Asiatic mainland is shallow, and beset with sand-banks and reefs, which form a sort of jagged isthmus, called Adam's Bridge. However, notwithstanding the proximity of India and the slenderness of the strait, the flora and fauna of Ceylon bear a less close resemblance to those of the Deccan than to those of the distant island of Madagascar; scientists have argued from this fact that the Asiatic island, the vast African island, and the Seychelles were once parts of a continent which is to-day submerged by the Indian Ocean.

Like India, Ceylon is famous for its powerful and luxuriant vegetation. In the north, the palm is the prevailing tree, and in the south of the island there are twenty million cocoanut-trees. The cinnamon plant, which was so profitable to the Dutch when they possessed Ceylon, has been superseded to a very large extent by the coffee-plant, which constitutes the wealth of its present English masters.

In the low countries, occupying the entire north of the island, the south-east, and various plains and sea-coasts, the climate is excessively debilitating, having an annual mean of 80° to 83° F.; but between 3000 and 5000 feet above ocean-level the year is a perpetual spring. Pedrotallagalla (8327 feet) is the highest of the Ceylon summits, all of which are gneissic or granitic. The monsoons bring copious rains to the mountains, especially on the slope west of Adam's Peak; on this portion of the western coast, the yearly rainfall is 236 inches, while at Manaar, in the north, it is not more than 35 to 50. The mean of the island is estimated at 70 to 85 inches, but Ceylon is too small to have any mighty streams; the principal river, the Mahaveli Ganga, reaches the magnificent bay of Trincomali after a course of 134 miles, through a basin embracing about 4000 square miles.

Adam's Peak is 800 to 1000 feet lower than Pedrotallagalla; it terminates in an obeliscal rock which is ascended by ladders and chains. Buddhists, Brahmanists, Mohammedans, and even the Chinese, resort thither to worship an imprint in the rock, said by the Buddhists to be the footstep of Buddha, by the Brahmanists, of Siva, by the Mohammedans, of Adam, by the Chinese, of Fo, while the Portuguese considered it the footprint of Saint Thomas. During the 150 years of Portuguese supremacy, down to the capture of Colombo by the Dutch in 1656, the Lusitanian race made a profound impression upon the island; a corrupt Portuguese is still spoken in a few towns, and Ceylon contains 100,000 Catholics, against 45,000 Protestants. Buddhism is professed by 1,700,000 inhabitants, and it is said that a third of the best lands of Ceylon are attached to the Buddhist convents. The island is venerated, under the name of Lanka, by the peoples that have preserved a belief in the doctrines of Sakya-muni. There are 500,000 Hindus of the Saiva sect, and 200,000 Mussulmans.

Before Ceylon (the *Taprobane*¹ of the ancients) formed a part of the Portuguese empire, it was subject to Hindu princes, the descendants of conquerors who had seized it 543 years B. C. About the twelfth century, under these native kings, the island reached a high degree of civilization, some of the monuments of which have never been equalled by modern peoples. Time has not wholly destroyed the graceful edifices, the bas-reliefs, and the statues of Pollanarrua, a city of the great Prakrama Bahu, rising out of jungles and thickets. Anarajapura, to-day Anuradhapura, yet older and vaster, still exhibits, near a fig-tree 2175 years old, the enormous subterranean temple of Mihintala and the ruins of a dagoba, from the bricks of which a wall

¹ Corruption of Tamraparni, "shining like copper," perhaps on account of the reddish color of the soil. (See Tennent's *Ceylon*, I. p. 549, n. 1, and Turnour's *Mahawanso*, ch. VI. p. 50. — Ed.)

could be built, one foot thick and ten feet high, extending from London to Edinburgh. The city is said to have been more than 60 miles in circumference; its field of ruins is immense. Sufficient praise cannot be bestowed on the irrigation works which the people of Ceylon constructed in ancient times in the north of the island, where there are no mountains, no large rivers, and no monsoon rains. They regulated nature by the creation of 30 lakes and more than 3000 reservoirs, a half of which are to-day filled up, emptied, or abandoned: the Padivil embankment was 80 feet high and 11 miles long, 33 feet wide at the top, and 230 at the base.

Of the 2,875,000 inhabitants of Ceylon, there are, in the south and centre, more than 1,920,000 Sinhalese, who are derived from a mixture of the aborigines with



SINHALESE.

Hindus, Malays, and Arabs. They are small, of a reddish complexion, with well rounded, graceful figures, and of kindly disposition. In their language, which seems to have been originally Dravidian, Aryan influence gained the supremacy through the Sanskrit, which was the organ of civilization, and through Pali, the religious tongue. The Sinhalese are so unfortunate as to possess Buddhist poems in this latter idiom of 500,000 stanzas. In the north there are 700,000 Tamils, who came from the Deccan, notably from the Malabar Coast; and, not including these settled continentals, people of this language come to the island at the rate of 60,000 to 160,000 yearly, to harvest the coffee-crop. So the number of Tamils is rapidly increasing in Ceylon; between the enumerations of 1871 and 1881 they passed from a fifth to a fourth of the pop-

ulation. This Dravidian race is very prolific, and furnishes the English colonies with the greater part of such of their coolies as are neither Chinese nor Negroes. As for the non-Dravidian immigrants from India, they are almost all from the banks of the Ganges, from the neighborhood of Benares and of Patna.

About 200,000 of the Ceylonese are of Arab stock, or rather they are derived from the alliance of Arab immigrants with the islanders. Fully 15,000 owe their



A NAUTCH-GIRL.

origin to the intermarriages of the aborigines with the old European masters of the island, whether Portuguese or Dutch; the Dutch part in the formation of these people is much less than the Portuguese, and the Dutch language long ago disappeared from Ceylon; the Burghers, as these Hollandish half-castes are called, have even become zealous Englishmen, speaking the English language, and aiding the English people in all departments of the government; the Lusitanian cross-breeds seldom demand employment of the rulers of the country; the greater part of them support themselves by manual labor in the more menial trades. In the central districts roam the black Vaddas, a small forest tribe; they live in a very retired manner; they are chaste in their habits, and not at all aggressive.

They speak a language which is very nearly like the Sinhalese, and it can readily be believed that the Vaddas and Sinhalese were formerly a single nation, of Dravidian race. Only the former lived apart and absorbed no new elements; they retained their savage customs, and were most worthy of their name, which signifies hunters, or archers. To-day even, they hunt the elephant, leopard, wild boar, bear, stag, and monkey, with no other weapon than a bow and arrow. These troglodytes are gradually adopting the Tamil tongue, which is opening up vast horizons to them.

The only safe, commodious harbor in Ceylon is on the eastern coast, at Trincomali; the great rendezvous for mail steamers is found, however, in the south, at Point de Galle. Colombo, the British capital, lies on the western coast; this city, of 110,500 inhabitants, is built on a wretched roadstead at the mouth of the Kelani. Colombo is not the capital, however, except in the cool season. In hot weather, the governor and his suite ascend the mountain to Kandy, a town in the interior, at an altitude of 1700 feet, on a bend of the Mahaveli Ganga.

The Laccadives. — The Laccadives emerge from a deep sea fronting the Malabar

Coast, north of the 10th parallel. The archipelago, comprising 20 square miles, is of coral formation; it is covered with cocoanut-trees and banana-trees, which are watered by no fountains. Laksha Dvipa (Laccadives) signifies "a hundred thousand islands," but the group, in reality, numbers only fourteen (nine of which are inhabited), together with banks, reefs, rocks, and sands, which are partially covered at high water. The inhabitants embrace about 13,000 or 14,000 Arab cross-breeds, who speak Malayalam.

South of the Laccadives, and south of the 8th parallel, are the Maldivé Islands, which stretch along 550 miles, and yet their entire area is only 1930 square miles at low tide and 350 at high tide. Like the natives of the Laccadives, the Maldivé islanders consider their islands almost countless; they estimate the number at 40,000 or 50,000, and their pseudo-king, who is subject to England, complacently styles himself the monarch of the thirteen provinces and of the twelve thousand islands; but there are hardly half a thousand of them, 175 of which are inhabited. The 150,000 Maldivé islanders dwell under the shadow of cocoanut-trees, on sand and coral, along the sea-coast, or on the shores of a lagoon encircled by regularly rounded coral islands. They are of Sinhalese origin, with Arabic and African mixtures; they speak a Sinhalese *patois*, and profess Mohammedanism.

INDO-CHINA.

This vast country is occupied by peoples that have never carried their audacity nor their fame to any great distance, except in the case of the Malays, who have scattered themselves over an immense archipelago;¹ it has no national title. The inhabitants include Mian-ma or Burmese, Thai or Siamese, Laos, Malays, Cambodians, Cochin-Chinese, Anamese, and Tonquinese; but no single tribe has gained the supremacy and bestowed its name on the peninsula, which bears simply the geographical title of Indo-China.

Advancing eastward from the Delta of Bengal, we find man taking on more and more of the Chinese character, and the scenery becoming less and less like that of India; setting aside linguistic differences, in Tonquin we seem to enter a province of southern China. The Anamese tongue has, moreover, strong affinities with the Chinese. The peninsula also forms an intermediate link in the chain of history between Asia and the great Melanesian archipelago, which stretches from the Indian world to the Australian.

Coasts. — Mountains. — Rivers. — Indo-China embraces about 800,000 square miles, with 35 to 40 million inhabitants. It is backed against the eastern Himalayas, or Sin-shan masses, between the Indian Ocean and the China Sea, in districts that are but little known to us. It is prolonged on the south between the same two seas by a peninsula of 750 miles, which is extremely slender at the root and near the middle. The area of Indo-China is a third less than that of India, but its coast-line is much greater. There are few countries as fertile or as favorably situated. But, unfortunately, disease lurks in its *arroyos*, forests, and swamps, and in the tepid mouldiness which constitutes the perennial source of its life.

¹ It is by no means certain that Indo-China was the first home of the Malays.

The country is deficient in plains; the valleys of the large streams are separated by steep mountain-ranges, so that they are all sunken, elongated, isolated regions. These chains trend from north-west to south-east; any attempt to describe them would be futile, for they have been but imperfectly explored, few measurements have been made, and their positions have been only confusedly indicated on the maps. Their summits seldom tower above 8200 feet, at least in the south; the north perhaps rears some sublime peaks, and the height of Dupha Bum, on the northern Burman frontier, is estimated at 13,700 feet. The mountains of the Malay Peninsula, forming



A RICE-MILL.

a little world apart, are severed by a depression from the other Indo-Chinese chains. Their principal peaks apparently reach an altitude of about 7900 feet.

Two of the Indo-Chinese rivers are important streams; they are long and abundant, and terminate in deltas. One, the Irrawaddy, flows through Burmah; the other, the Mekong, which debouches on the shores where Camoens suffered shipwreck, belongs to France; it has been explored into China, but the extreme upper part of its course is still a region of mystery. The Salwin, a Burman stream, is likewise broad and full; the Menam, in Siam, is not as large. The tropical sun along the banks of these streams is fatal to Europeans, but it shines on a luxuriant vegetation, which includes the plants of India, China, and Java, on huge animals like the elephant and the rhinoceros, on lithe creatures like the tiger, and on men of different races and tongues.

The ancient influence of India is traceable west of Siam in the names of places, mountains, and rivers, which are of Sanskrit origin; and the present tendency of England's influence is toward making this section an annex of India. Calcutta is the city where power resides, and from which light emanates; the English of India are supreme in a part of the country, and threaten the rest; lastly, since this partial establishment of British rule, the Hindu element has increased, and thousands of people immigrate from the banks of the Ganges every year, especially in times of famine, to work on the plantations;—in this way the domain of the Bengali dialect is gradually extending. Politically, the peninsula embraces British Indo-China, Burmah,¹ Siam, the Malayan States, which are to a greater or less degree feudatory dependencies of England, and French Indo-China.

BRITISH INDO-CHINA.

British Burmah.—British Burmah,¹ which has been seized piece by piece from the Burmese, includes three provinces, namely: Arakan, a long, slender strip included between the Bay of Bengal and the mountain-chain called Yoma (8386 feet), and scooped out by heavy rains from 10 to 20 feet each year; Pegu, the lower valley and delta of the Irrawaddy; and Tenasserim, a narrow zone between the mountains of Siam and the sea-coast. The total area is about 87,000 square miles; the inhabitants number 4,569,000, of whom nearly 3,000,000 are Burmese, more than 600,000 barbarous or semi-barbarous tribes, such as the Karens, the Khyengs, the Shans, etc., 250,000 Hindus, who are growing perceptibly through immigration, and 12,000 Europeans and Eurasians. Every day numerous families emigrate from free Burmah to the regions controlled by the English; the natives say that “the villages of British Burmah are becoming cities, while in Burmese Burmah the cities are degenerating into villages.” Rangun, the capital, is built on three rivers of the Irrawaddy delta; it has a population of 181,000. Maulmain contains 58,000 inhabitants.

Straits Settlements, Malay Peninsula.—The colony called by the English the Straits Settlements includes continental land in three separate fragments,—Wellesley, Tulu Saggar, and Malacca,—all of which are on the western shore of the Malay Peninsula, and two small coast islands, Pulu-Pinang and Singapore. These sections embrace together 1445 square miles, with 568,000 inhabitants, of whom 175,000 are Malays, 175,000 Chinese, 69,000 Hindus, 7000 Eurasians, and less than 1700 Whites. The Malay Peninsula, from which it is supposed the Malays peopled the vast archipelago between Asia and Oceanica, has already ceased to be Malayan, wherever Mongol and Aryan immigrants have come to work for the planters and the English merchants, or to tempt fortune for their own profit. But throughout Malaisia the Malays predominate over the foreign elements.

Malacca is the only one of the three fragments of the mainland which possesses any fame; Wellesley and Tulu Saggar have made no mark in history. The once powerful Malacca passed from the Malays to the Portuguese, from the Portuguese to

¹ See note page 340.

the Dutch, and, lastly, from the Dutch to the English, who now govern it. British activity has failed as yet to revive the city of Malacca, which is peopled by scarcely 20,000 souls. Malay mixed with Portuguese and a corrupt Portuguese crossed with Malay are spoken here. Every trace of the sagacious Dutchman has been obliterated. On the contrary, the adventurers from the Tagus and the Minho have left a deep impression on the settlement, as is shown by the prevalence of family names common in all Portuguese territory.

Pulu-Pinang. — Pulu-Pinang, or "Areca Island," a short distance from the Wellesley seaboard, supports a mountain of 2723 feet; the island is healthful. It has belonged to the English for a hundred years (since 1786); it is known officially as Prince of Wales Island; the capital, Georgetown, has an excellent harbor. The population of the island is 91,000; among these are 45,000 Chinese, 22,000 Malays, 14,000 Tamils, and 4500 Tamil and Malay half-breeds, called Jawi-Pekans. There is a Catholic seminary here, from which fervent missionaries are sent out; but the Orient, whether Hindu, Malay, or Chinese, seems to refuse to become Christian.

Singapore. — Singapore, "City of the Lions," at the extreme south of the peninsula, contains 193,000 inhabitants, distributed in part as follows: 87,000 Chinese, 22,000 Malays, 10,500 Tamils, and 6000 Javanese. It has an excellent harbor, commanding the Sea of Passages, — the name given to the collection of channels through which the Strait of Malacca opens into the waters which beat Sumatra on the west and Borneo on the east. It is a Malayan country and a British colony; but China is the dominant power. The Chinese are to be found almost everywhere, engaging in all sorts of business, — from the lowest manual toil to the most important banking affairs. The entire Malay Peninsula, including the portion governed by England, the part tyrannized over by Siam, and all that is subject to different native princes, contains, perhaps, 1,575,000 inhabitants, on an area of 96,500 square miles. It is proposed to canalize the isthmus of Kra, in the northern part of this tongue of land which separates India and China; the region through which the cut will be made, if at all, is only 100 feet above sea-level.

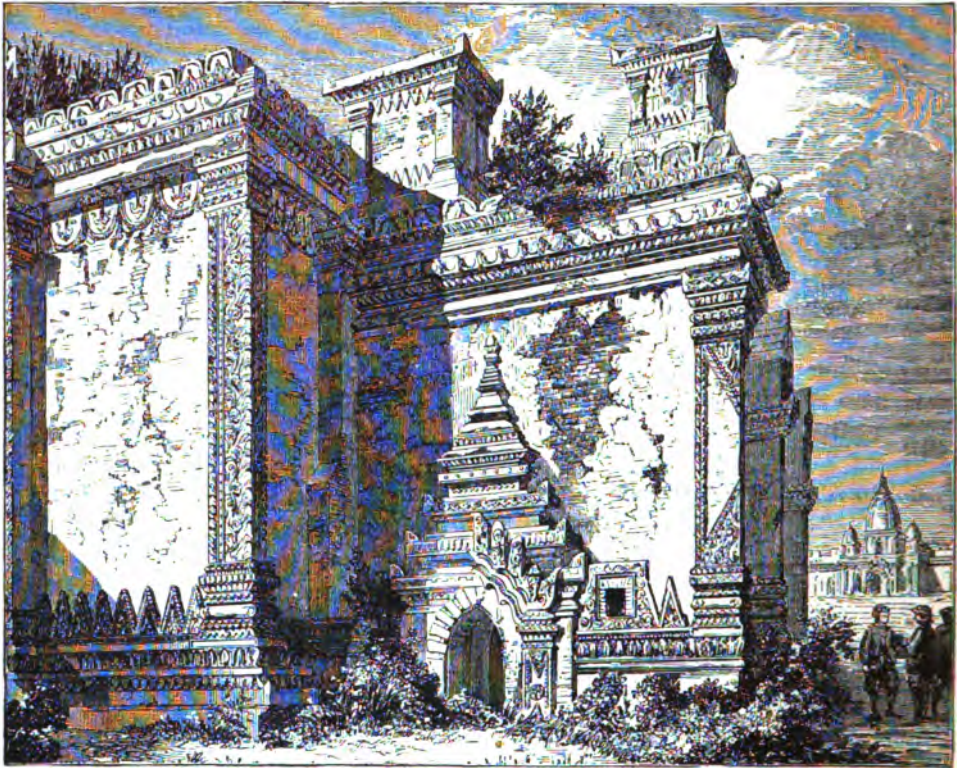
The Andaman and the Nicobar Islands. — The Andamans and Nicobars lie along an arc of a circle which would connect the delta of the Irrawaddy with the northern point of Sumatra.

The Andamans, having an area of 2550 square miles, with 22,000 inhabitants, belong to England. The islands form a British convict settlement for East Indian criminals, 8000 of whom have been quartered at Port Blair. The Andamans, or Mincopies, are very skilful with the bow; they are a puny race of Blacks, the men of medium size being scarcely 5 feet tall and the most stalwart not over 5½. The Great Andaman Island, the largest of the archipelago, situated between the 10th and 15th parallels, is 155 miles long, with a width an eighth or tenth as great; it supports a mountain 2950 feet high.

The feverish Nicobars, south of the Andamans, originally belonged to Denmark, but are now subject to the English. They cover an area of 634 square miles. Their loftiest summit is 2632 feet above sea-level. The natives, of Malay stock, are 6000 in number; they are tall, strong-limbed savages. The Indian government has a penal colony in the beautiful seaport of Nancowry.



A FAN-PALM, ON THE GREAT ANDAMAN.



RUINS OF A TEMPLE OF PAGAN.

BURMAH.

The Irrawaddy. — The Salwin. — Burmah,¹ which is under an hereditary and despotic government, supports $7\frac{1}{2}$ million men, on 190,500 square miles. It stretches from north to south, along the Irrawaddy and the Salwin.

The Irrawaddy is not a prolongation — as was once thought — of the Dzangbo, the mighty torrent of eastern Tibet; it is, nevertheless, a powerful stream. According to careful measurements made during ten years, it discharges into the Indian Ocean 480,226 cubic feet per second, with extremes of 46,000 and 1,977,000; a volume equalling that of the Danube, of the Rhone, and of the Rhine combined. Many of its gorges are not over 160 feet broad, but the waters flow through them at dizzy speed, with a depth of 250 feet. In Burmese Burmah, it bathes ruins of ancient cities; in British Burmah, it passes Prome, and 137 miles from the ocean, as the crow flies, it spreads out in a delta of 17,750 square miles. Its true name, Airavati, is an Aryan word, meaning the Elephants' River.

¹ Burmah, which now forms one of the provinces of British India, is divided into Lower and Upper Burmah; the former consists of the old province of British Burmah (see page 337). Upper Burmah has been annexed to the Indian Empire since February, 1886. King Theebaw, the reigning monarch, was then deposed and pensioned, and the government placed under the Chief Commissioner of Burmah and his assistants. — Ed.

The Salwin is smaller than the Irrawaddy; far fewer clouds break over the sierras from which its waters are derived. The Salwin rises in southern China. Successively Chinese, Burmese, Siamese, and English, it passes, even in its lower course, into extraordinary constrictions, measuring scarcely 100 feet from shore to shore; and yet at high water the flow of the stream exceeds 700,000 cubic feet per second.

The Mran-ma, or Burmese.—The Burmese call themselves the Mran-ma, generally pronounced Ba-má; their name is, perhaps, derived from Brahma. This supposition warrants the belief that the Burmans came from India, from the banks of the sacred Ganges; but their strong resemblance to the Chinese points to a different origin. They are small, well formed, lithe, and robust; they are courageous, prodigal, gay, and free from all rancor. The Burmese language is poor in forms, and monosyllabic, like Chinese; but it is richer than Chinese, owing to a slight influence exerted in ancient times by the idioms of India. The Mran-ma are addicted to chewing the betel-nut, and they speak very indistinctly; “they are a race of stutterers.”

Pali, which is in no way related to Burmese, and which can boast of a nobler origin, is used in the religious rites, and is in a measure the official tongue. The large cities all have two names,—one Burmese, the other Pali; the latter is the one made use of in all government documents. To say that Pali is the religious and official tongue of the Burmans is equivalent to saying that Buddhism reigns in Burmah.

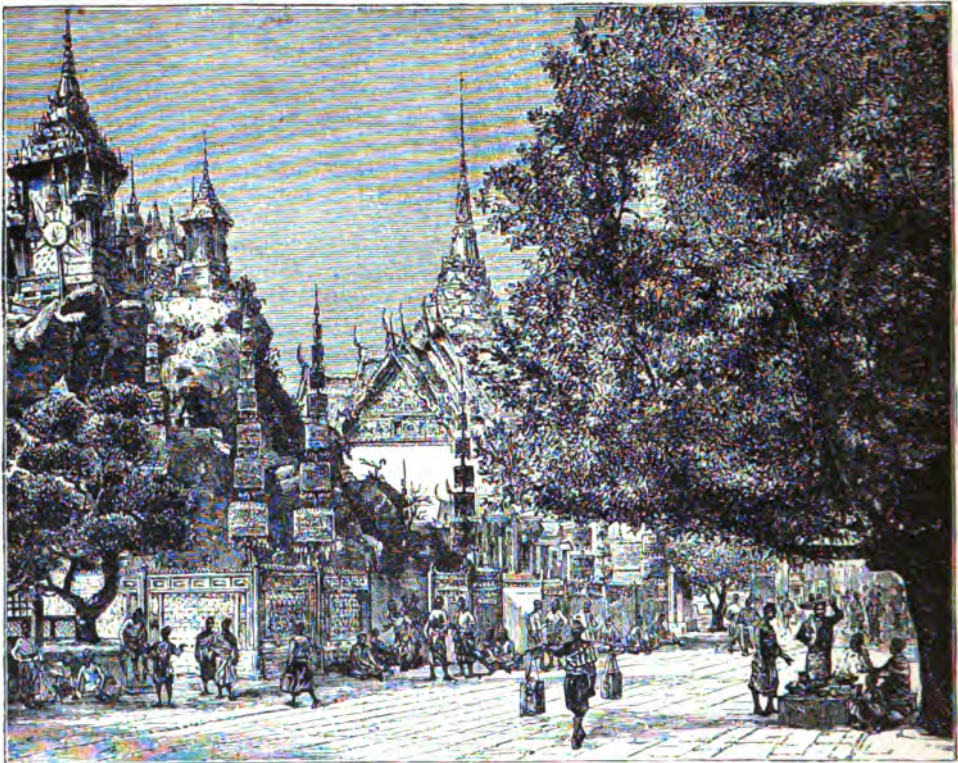
Cities.—In Burmah, capitals are created and fall to suit the royal caprice. Mandalay (pop. 188,000), two miles from the Irrawaddy, is the metropolis at present. It is about 30 years since it superseded Amarapura, or the “City of Immortality,” itself near the Irrawaddy. Amarapura had succeeded, toward the end of the last century, the city of Ava, in Pali Ratnapura, or “City of Gems.” This latter town is now a mass of ruins; from its temples, with white or gilded roofs, the site of the City of Immortality is visible, six miles to the north-east. These two old Mran-ma capitals flourished and fell very near each other; and it is in their superb plain that the young Mandalay has risen into power.

Ava, which was the capital for more than 400 years (from 1364), received the sceptre from Pagan, another town on the Irrawaddy, a stately metropolis, where, according to the legend, 9999 pagodas towered into the luminous Burman sky; at least 1000 of these are still standing. As for ruins other than those of religious or military edifices, they are rare, or wholly wanting, in Pagan, Ava, Amarapura, and Sagaing. The latter is another ancient Burman capital, on the hills facing Ava, across the Irrawaddy. After the lapse of centuries, what remains could we hope to find of the bamboo huts in which the poor Burmans lived, or of the wooden dwellings of the wealthy?

SIAM.

Siam: the Menam.—The despotic kingdom of Siam was severed from Burmah during the last century. It borders the Gulf of Siam, which sets back to a great distance into the land, with the breadth of a sea, between the Malay Peninsula on the west and the Siamese, Cambodian, and Cochinchinese shores on the east. This gulf has a coast-line of over 900 miles; it no longer receives the Mekong, a very large stream, the deposits of which have already filled up vast ocean-tracts; but the Menam,

or "Mother of Waters," empties into it. This stream is smaller than the Mekong, but it is, nevertheless, a powerful river, as its full name, Chow-phy-a-me-nam (literally, "Prince, chief, mother of waters"), indicates. It rises on the confines of Burnah and belongs wholly to Siam; it passes Bangkok, Siam's brilliant and busy capital; the embouchures of the delta-channels are too obstructed by bars to admit heavy ships. Siam has an area of 282,000 square miles, but it contains not more than 5 or 6 million inhabitants; it must be borne in mind, however, that the Siamese are mostly crowded into the valley of the Menam and into its delta, which is a sort of Holland, fertilized by the periodical inundations of the stream, and checkered with canals dug



A STREET IN BANGKOK.

by Chinese navvies. The rest of the country, a vast, uninhabited region of forests and mountains, has a deep, strong, exceedingly fertile soil; it is hot, and well watered from the mountains.

Thai. — Chinese and Laos. — Of the 5 or 6 million inhabitants, 2 million are supposed to be Siamese or Thai, a million Chinese, scattered through the towns and villages, where they engage in every kind of industry, and carry on all sorts of financial schemes, 2 million Lawa or Laos, 500,000 Malays, 300,000 Cambodians, etc. All these figures are eminently hypothetical. The Laos on the middle Mekong, and the Shans on the upper Menam, belong to the Thai nation, except that they are of purer race than the civilized Thai, into whose blood many Malayan, Burman, Cambodian, and especially many Chinese elements have entered.

The regnant people among the Siamese — endowed, we are told, with fine intellectual and moral qualities, affectionate, gay, and gentle — are totally destitute of physical beauty; like their monosyllabic tongue, they have borrowed too largely from the Chinese. Buddhism holds tyrannical sway in Siam; the Sakya-muni of India is worshipped here, under the name of Sommonacodum, in superb pagodas, which are built with loving care, and afterward abandoned to their fate. The *talapoyns* or priests of Buddha are highly honored by the two Siamese kings. — Bangkok has two kings on the throne at once, but one of them is only nominally king. The Thai hardly know the meaning of the word liberty, although their name signifies a “free man”; it is even said that the verb *saremival*, to rule, means, literally, “to devour the people.” A good part of the nation is in slavery for debt.

Cities. — The vulgar designation of the half-Chinese capital, a town of 600,000 souls, is Bangkok; its religious title, in the Pali tongue, is Thanaburi; its official appellation is Si Ayuthia Maha, or “Great City of the Angels.” It supplanted Ayuthia, the metropolis destroyed more than a hundred years ago by the Peguans, and situated, like Bangkok, on the Menam. Ayuthia was the capital from 1350 to 1767; magnificent ruins of it still remain, equally beautiful by nature and art.

Bangkok is built on canals of the deep and turbid stream, in the bosom of a delta which is as flat as the Hollandish polders, and which is submerged for several months in the year by the floods; it is an Oriental Venice confusedly scattered over mud-islets, with teak-wood houses and Buddhist temples, capped with roofs of painted tiles; the river is alive with multitudes of bazaars floating on bamboo rafts.

A decayed metropolis, Angkor, majestic in its waste, was the capital of the almost forgotten Khmers. It rises at the extreme south-east of the kingdom, in Siamese Cambodia, near Tonli Sap, a large lake connected with the great Cochin-Chinese stream by a stagnant river, the waters of which set toward the stream or toward the lake according to the height of the Mekong. The Khmers ruled over a vast domain, and left as their contribution to history monuments which amaze us by their magnitude, and which, notwithstanding their massiveness, possess artistic beauty. Temples, where the people prostrated themselves before Indra or Vishnu, princely mansions, imposing avenues, arrowy roads bordered with statues, stairways guarded by stone monsters, paved and walled trenches, artificial lakes, gigantic busts of Buddha, enormous images of real animals or imaginary beasts, — nowhere else, not even in Egypt, are the evidences of the passing of a powerful nation so eloquent or so conclusive as in the silence of the desert of Angkor. These stupendous ruins, which the tropical forest is besieging, and which it will at last overcome, rise very close to Cambodia.

FRENCH INDO-CHINA.

Anam. — Anam is the mere shadow of its former self. The delta of the Mekong, or French Cochin-China, belongs wholly to France; Tonquin was ceded to France in June, 1884; the narrow seaboard of Anamite Cochin-China is forced to obey France, and France at the same time protects Anam. With Cambodia, which is also protected, France rules here over 15 to 18 million men, or possibly 20 million, on a territory of about 200,000 square miles.

The river of French Cochin-China and Cambodia is the Mekong, while Tonquin despatches its waters to the Red River. The streams of Anam, or the recently independent Cochin-China, are very short owing to the proximity of the mountains to the sea, and they are scant because the rains brought by the south-west monsoon fall on the western slope, which is drained by the Mekong.

The Mekong. — The sources of the Mekong are as yet undiscovered. All that can be affirmed with certainty is that it rises somewhere between China and Tibet, between the Burmese and Siamese Salwin, on the west, and the Chinese Yangtsz' kiang, on the east, and that under the fantastic name of Lantsang kiang, or River of the Great Dragon, it twists through the gloomy depths of frightful gorges. It is a large stream when it penetrates into the territory of the Laos, those boorish brothers of the Siamese; at its entrance into Cambodia it has become a huge flood. Twice in its passage through the Laos states, it turns eastward, as though seeking the Gulf of Tonquin, opposite the Chinese island of Hainan; at one point it is only 45 leagues distant from this sea, but the slope of the land carries it toward the south again. It flows sometimes in very broad expansions, — reaching a width of 12 miles measured across a net-work of branches. Sometimes it is extraordinarily narrow, — in places not exceeding 300, 150, or even 130 feet in breadth, but at such spots it is over 300 feet deep. Mighty rapids disperse or concentrate the waters according to the caprice of the rocks. The most formidable of these are in the sandstone pass above the mouth of the Semun, an important affluent; the last sudden break in the level occurs just before the stream enters Cambodia. Among the noted falls are the cataracts of Salaphe and of Papheng, or the cataracts of Khong, which are fully 50 feet high. At the foot of the last rapid the Mekong is already affected by the tide; at the same time it begins to move through its alluvia, for nearly all that is now Cambodia and Cochin-China has been conquered from the sea.

Before Pnom Penh, the capital of Cambodia, the Mekong divides into the Anterior stream, the Posterior stream, and the Tonli Sap. The Anterior and Posterior rivers flow south toward the ocean, while the Tonli Sap runs north for 71 miles, with a mean breadth of 2300 to 2600 feet, to a large lake with shifting banks, bearing the same name as the river. When the moist south-west monsoon prevails, the Tonli Sap River flows toward the lake with a depth of over 60 feet, discharging a powerful flood into it, in all from 1236 billion to 1270 billion cubic feet of water, or rather of water and mud, for the Mekong carries 50 billion cubic feet of earth and débris yearly; it is admitted that the Cambodian lake will be filled up in two centuries. Meanwhile, the intermittent emissary of the floods of the Mekong transforms the sheet of 100 square miles (with at most a depth of 4 or 5 feet), which the dry season leaves in this lowest Cambodian depression, into a basin 70 miles long by 16 broad, 43 to 46 feet deep, and embracing an area of 580 to 620 square miles. The floods of the Mekong terminate in the latter part of September, and then with the lowering of the stream the Tonli Sap turns back on Pnom Penh, and nearly empties the lake. The waters are at the same time drained by evaporation, except in the central hollow, which is an inexhaustible fish-pond. Below Pnom Penh, the Anterior and Posterior streams (125 miles long) enter Cochin-China, where they become entangled through *arroyos*, or natural channels, with the Vaico and the Donnai, two small rivers which have with time become almost independent of the large stream, but which were once, in the lower part of their course, its delta-branches. On these *arroyos*, ploughed through the alluvium, on the arms of the Vaico and Donnai, on the arms of the

Anterior stream or the river of Mytho, and on those of the Posterior or the river of Bassac, in the "Rush Plain" as well as in the regions unencumbered with reeds, the incoherent deposits of all this delta are annually remoulded and merit almost everywhere their ancient Cambodian name of Tuc Khmau, Black Water. The amount of water discharged into the ocean by the Mekong has not been sufficiently gauged for any exact figures to be given, but it is perhaps about that of the Ganges or of the Irrawaddy, namely, 425,000 to 530,000 cubic feet, with minima of 70,000 to 90,000, and a maximum of 2,650,000. Its length is estimated at 2200 to 2500 miles.

Basse Cochinchine. — Basse Cochinchine, or French Cochin-China, lies in the south-



SOLDIERS OF SAIGON.

west, under the 9th, 10th, and 11th parallels of north latitude, and consequently under a tropical, almost an equatorial, sky. The Anamese, who colonized it for two centuries (from 1650), driving back its old masters, the Cambodians, named it the "Country of the Six Provinces," and, less officially, the "Country of Gia Dinh." It embraces 23,000 square miles, comprised in two dissimilar sections. On the west, centre, and south is the Low Land, the delta of the Mekong with its Posterior stream and the five or six branches of the Anterior; and on the north-east of this huge alluvial labyrinth the small delta of the Vaico and the Donnai. On the north-east and east is the High Land (relatively high). The Nui-ba-den (Black Lady), the culminating summit of French Cochin-China, has an altitude of 2897 feet.

These 23,000 square miles are occupied by about 2,000,000 inhabitants. What

vast vacant tracts still remain in this moist, hot, fertile, alluvial country! But the French will get little profit from them. At Saigon, the mean of the coldest month of the year is 80.6° F., while that of the hottest is only 85.75°; and the annual rainfall is 6 feet. Therefore, although the colony, which is nothing more than an immense trading-post, extends now over the whole of eastern Indo-China, and although at some future day it may send its cargoes of rice to all the ports of the world, it can never be to France what Canada once was or what Algeria now is.

Of the 1,916,000 inhabitants, more than 1½ million are Cochinchinese, more than 150,000 Cambodians, 56,000 Chinese (fully a fourth of whom are ruined by the use of opium), a few thousand Europeans, mostly French, and some Franco-Anamese half-castes. The Cochinchinese, who are crosses of the Anamese with the Cambodian, with the Chinese, and with the Malay, bear a very exact resemblance to their brothers of protected Cochinchina and of Tonquin. A robust physical development and handsome features are not, then, to be looked for among them, nor a frank, spirited disposition; they have short legs, highly protruding cheek-bones, flat noses, and small, squinting, oblique eyes; they are supple-bodied, keen-witted, and cunning, patient, and kindly, possessing a strong love for their families and a certain taste for study. Their language is a dialect of the Anamese, which is a monosyllabic tongue, closely resembling Chinese. They profess belief in Buddha. They occupy themselves in the cultivation of rice, often working in water up to their waists, and aided by wild buffaloes, which they are able to drive, but which attack Europeans; panthers and tigers stealthily watch for their prey in the miasmatic forests.

Cochinchina is much more Chinese than French; the Chinese, who immigrate hither in large numbers, control all the trades and conduct all the business. They bring no wives with them into the country, but ally themselves with the native women, and by this means the race is tempered for the combats of practical life.

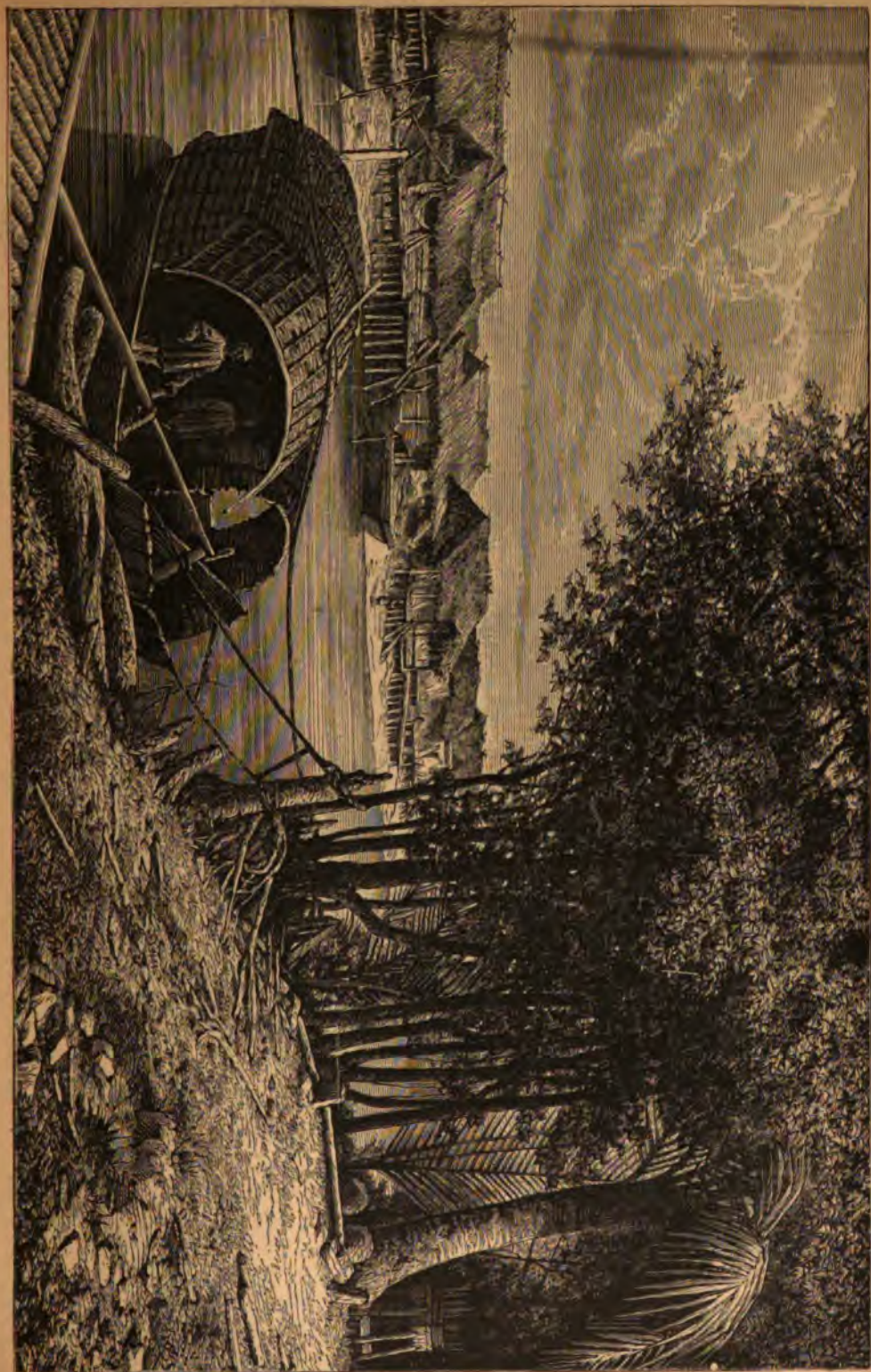
Saigon,¹ the capital, contains 82,000 inhabitants, including the Chinese suburb of Cholon.² Though situated well inland, on an affluent of the Donnai, it is reached by the largest vessels.

Cambodia. — Cambodia has been under French protection since 1863; * it is nominally subject to a king. The inhabitants number over a million, on nearly 33,000 square miles. A few provinces governed by the Siamese kings and a kingdom subject to France constitute the sole remains of the empire of the Khmers. Marvellous fields of ruins, with remnants of some of the noblest monuments ever constructed by man, testify to the ancient grandeur of this people. Judging from the temples of Angkor, the old capital, about fifteen miles north of the Lake of Tonli Sap, the Khmers attained their greatest power between the tenth and fourteenth centuries. In its palmy days, their empire extended for a long distance up the stream to which one of their two names was given. The Khmers called themselves also *Kampuchea*, a title from which the Portuguese, who were the first explorers of the mouths of the Mekong, formed, so it is said, the word *Kamboje*. The *Kampuchea* reigned over the countries which have since become the kingdom of Siam and over the entire delta of their huge river, with the adjacent deltas, as far as the point where the Cochinchinese coast makes a sharp turn toward the north. The Anamese robbed them of Basse

¹ The Gia Dinh of the Anamese. The name is the same as that of the country.

² Four or five miles distant.

* In 1887, the French holdings in Indo-China were united under a civil Governor-General of Indo-China, with a Lt. Governor in Cochinchina, a Resident-General in Tonquin and Anam, also one in Cambodia. — Ed.



AN ARM OF THE MEKONG.

Cochinchine, by colonization rather than by force; the Siamese, having regained their independence, encroached on their old masters and subjugated several Khmeric-speaking provinces in the basin of the Great Lake (Tonli Sap); then came a day when, to escape certain death in the partitioning of her territory between two rigorous despots, Cambodia threw herself into the arms of France.

It was under the influence of India, to whose great deities they consecrated their temples, that the Cambodians displayed their power and their genius; and doubtless the race is in a measure indebted to the blood of the Gangetic peninsula. In any case, their language is Aryan.¹ These Cambodians proper are superior in disposition to the surrounding peoples, namely, the Siamese, the Cochinchinese, and the Anamese; but they form scarcely three-fourths of the population of Cambodia; the other one-fourth includes Chinese and Anamese in nearly equal proportions. The latter are patiently carrying on the colonization which has already won Basse Cochinchine for them; the former come to make their fortune in the cities, the chief of which is Pnom Penh.

Pnom Penh (pop. 12,000), the capital, overlooks the Four Arms, in a situation almost unique in the world; the name Four Arms is given to the spot where the Tonli Sap, the Anterior stream, and the Posterior stream branch off from the Mekong.

Anam and the Anamese. — Cochinchina proper, or Anam, extends from French Cochinchina (the delta of the Mekong) to Tonquin (the delta of the Sang Koi), through nearly ten degrees of latitude, or from about 10° 30' to 20°; in the other direction it stretches from the ocean to mountains which are as yet almost unexplored, but which are known to form a sharp line of separation between two climates. In the east, from the crest of the sierra to the sea, the atmosphere is brilliant and dry; in the west, owing to the exposure to the monsoon, it is excessively humid. The torrents of the eastern slope are, therefore, scant, and they are necessarily short, for the mountain-chain almost skirts the shore; but broad, full rivers descend on the west toward the enormous Mekong. Among the bays of the eastern coast (some of them of great beauty), one at least is remarkable; this is the bay of Touron. It is framed in by mountains, south-east of Hué, and varies much in appearance, according to the hour of the day, the season, or the state of the atmosphere: sometimes it resembles a Norwegian fiord, sometimes an Alpine lake, or again it is the image of the Bay of Naples or the Bahia of Rio; it is ample, secure, and deep, and capable of sheltering the largest fleets. The French conquest of Indo-China began with Touron. Their forces, which remained there two years (1858 to 1860), left as the only evidence of their occupancy a cemetery filled with the bones of soldiers and sailors mowed down by the climate. But if Anam thrives, a large city will grow up on this magnificent harbor.

Anam, thus hemmed in and, as it were, suffocated on the coast by pathless mountains, which are naked or covered with stunted trees, and which are inhabited by savage tribes, supports perhaps more than 6 million men on its 106,000 square miles. Very little is known of the origin of the Anamese: they have been classified with the Japanese, with the Malays, and again with the Chinese, to whom they bear a striking likeness, morally as well as physically. They are, moreover, indebted to China for their government, usages, and customs, ideas, philosophies, religions, and dogmas. The Anamese language¹ is really nothing but a Chinese dialect; it can be

¹ For Professor Whitney on this subject, see art. *Philology*, Enc. Brit. Vol. XVIII. p. 779.

written as easily in the Chinese as in the equally ideographic national characters. The Anamese, recognizing the priority and superiority of the Chinese, call him "uncle." They call themselves Giao-chi.¹ As for the name Anam (for Ngau-nan), it signifies the Peace of the South, or the Pacific South. Anam, properly so called, excluding Cochin-China and Tonquin, has two official titles: Nam-ky, or Southern region, in distinction from Bac-ky, or Northern region, the appellation given to Tonquin; and Dang-trong, or Interior route, as opposed to Dang-ngoi, or Exterior route, another designation of Tonquin.

Hué (pop. 60,000), the capital of Anam proper, was also the capital of the entire Anamese empire before the advent of the French in the country; it is situated on a shallow stream, not far from the sea. The fortress is held by the French as security against the treachery of the Anamese ruler; this despot, who is advised by faithless mandarins, is the worst enemy the French have here.

Tonquin: the Red River Delta. — Tonquin, or Tongking, embracing 34,000 to 35,000 square miles, is comprised within limits that are imperfectly determined in some places and wholly unknown in others. The term Tong-king is a corruption of Dong-king, and signifies the Oriental Court. This latter name was formerly borne by

Hanoi, the metropolis of the country, as opposed to an Occidental Court (Tay-king), a city and stronghold which has been destroyed.

The uplands of Tonquin are nearly or entirely uninhabited, but the low, level

¹ "The bifurcated toes," because with the Anamese the great toe is widely separated from the rest.



AN ANAMITE MANDARIN.

delta, formed of an inexhaustible red alluvium, is like a Chinese ant-hill. The light houses, erected under lithe, graceful trees, and the villages and towns touch each other. The population probably reaches fully 6 millions, and perhaps 9 or even 10 millions. Burmah and Siam border it on the west, or, rather, the districts stretching along the western frontier, and which are still unexplored, are inhabited by barbarous tribes which would be subject to the Burman emperor or the Siamese kings if these potentates were nearer or more powerful. On the north, Tonquin is bounded by the Chinese provinces of Yunnan and Kwangsi, while on the east it faces Hainan, a Chinese island in the Gulf of Tonquin. The Anamese of Tonquin are even more closely allied to the Chinese than are those of Cochin-China.

The Tonquinese seaboard, not including the lesser curves, measures about 400 miles. The Gulf of Tonquin is often rocked to the very bed by typhoons, and, what is very unusual in these latitudes (18° to 21° or 22° N.), it is frequently veiled in fog and mist during the winter and early spring. In the north-west are thousands of rugged islands or islets; they extend in a line from north-east to south-west, and face coast indentations, one of which, the bay of Allong, is so commodious and safe that the future control of the commerce of Tonquin has been predicted to it. These archipelagoes of close-set limestone reefs and lofty, forest-clad islands serve as a refuge for the Chinese, Anamese, and Malayan pirates. They are destined to become hills and isolated mountains in the delta which is forming at the expense of the Gulf of Tonquin. The waters of the gulf are often less than 65 and rarely more than 325 feet deep. The delta is rapidly growing from the accretions of mud brought down to the embouchure by rivers (*sang*), the most important of which are the Red River and the Thai-binh. Both these streams enter the sea by numerous mouths. Chinese writings have preserved a record of the period when Hanoi, to-day nearly 60 miles from the shore, was on the very hem of the waves: a comparison of the present coast delineations with what we can learn from all the records of the past indicates an average annual advance of 157 feet, or a mile in a little less than 34 years.

The Thai-binh, north of the Red River, is not a powerful current; it issues from the Babé, a plateau lake of vast size in the rainy season but reduced to three small ponds during the droughts. In its middle and upper courses the river is called the Sang-kau (or Sang-kao); below Bac-ninh it anastomoses with the Red River, and then divides into numerous delta-arroyos, none of which has deep communication with the ocean. The mouths of the Red River, or the Sang Koi, are no better suited to navigation than those of the Thai-binh. The Sang Koi rises on Chinese soil, in the mountainous district of Yunnan, and is navigable with great difficulty below Mang-hao, a small town in Yunnan. Between Hang-hao and Sontay, it receives in Tonquin two large streams, the Black River, flowing from granite gorges, and the Clear River; the green, transparent waves of the latter are all the more beautiful because Tonquin is nearly everywhere disfigured with impure running waters and with unwholesome springs. Beyond the mouth of the Clear River the Red River is 3300 feet broad. The tide ascends it to a point above Hanoi. In the rainy season the immense red flood, rising from 15 to 20 feet, submerges the delta and obliterates everything but the roads, the earth levees, the dikes around the villages, the borders of the rice-fields, and the hillocks and eminences which were once islands of the sea.

Mountain and Forest. — The delta, or the living portion of Tonquin, is the gift of two almost dead regions, known as the Mountain and the Forest; these sections of the country have been so slightly explored that the French are unable to direct their forces



AN ANAMITE COURIER.

there. The Mountain or Plateau occupies the north and north-west of Tonquin, from the northern margin of the delta to the Chinese frontier; here dwell the inhabitants of Tuyen-kuang, of Thai-naguyen, of Cao-bang, and of Lang-son, beyond deep defiles, with no navigable rivers and no roads nor paths to connect them with the rest of the world; the Thai-binh and the Clear River rise here. What are the heights of this tangled chaos of mountains? From 4000 to 5000 feet in the chains which have been measured, and possibly 6000 to 8000, or even 10,000 (?) in the direction of Yunnan. The Forest, consisting also of uplands, but more densely wooded than the Mountain, comprises the rugged country cleft by the Black River, all the bristling, jagged section extending from the right bank of the Red River to the undefined boundary between the eastern slope, or Tonquin territory, and the western slope, or Mekong territory. These summits are known to reach elevations of 5000 and 6000 feet, and doubtless some are 6500 high.

French Indo-China can only attain to the full measure of its strength by passing the Forest and establishing its power along the imposing Mekong. This stream and the town of Luang-Prabang, the key of the peninsula, are absolutely necessary to the security of French rule here.

Tonquin, with its tireless delta, its rice-fields, its mountains stored with minerals, — here iron, there copper, elsewhere veined with gold, silver, and tin, and elsewhere still abounding in coal, — constitutes the most favored portion of French Indo-China. The climate is not unremittingly torrid; even in the delta, the mean for January is not a half of the mean for June, and at Hanoi the temperature sometimes sinks to 45.7° F.

The Tonquinese. — The Tonquinese differ but slightly from their Anamese brothers of Anam and of French Cochinchina. There are, it is true, a few dialectic variations between the idiom of the Red River and that of the lower Mekong; but as regards physique¹ and features, aptitudes, manners and institutions, laws, religion, superstitions, literature, deference for China, and imitation of the Chinese, all these peoples of monosyllabic speech closely resemble one another, whether they are from Hanoi, from Hué, or from Saigon.

Hanoi (pop. 150,000) has various titles. Officially, it is the City of the Red Dragon (Tham-lang-than); it is also the Fort of the North (Bac-thanh) and the Court of the Orient (Dong-king); and, again, it is the Great Market (Ke-cho). Nearly all the Anamese cities have three names: an official title, a Chinese title, and a popular name. Hanoi (the French *Entraigues*) signifies *Between the Waters*. It is the capital of Tonquin and is built on one of the major branches of the Sang Koi, 345 miles north-north-west of Hué. Its marvellous *huerta* is unfailing; but the fluctuating, shallow stream is treacherous. Ships drawing more than 6 or 7 feet of water cannot approach the city.

¹ The Tonquinese are somewhat taller and better built than the Cochinchinese.



SI-NGAN FU.

THE CHINESE EMPIRE.

Fully a Fourth of Mankind. — Like Brazil, which touches nearly every other South American country, the Chinese Empire borders almost all the remaining states of Asia, — Siberia, the so-called Independent Turkestan, Afghanistan, India, Burmah, and Anam. With all its dependencies it embraces an area of 4,553,000 square miles, with 372 million inhabitants; that is, a little more than a fourth of the human family. Two-thirds of this territory is comprised in the more or less tributary states of Korea, Manchuria, Mongolia, Eastern Turkestan, and Tibet; China proper includes only about 1,550,000¹ square miles, but it supports a population probably fifteen times that of the feudatory states. All together, the latter may contain 22 million settled or nomad inhabitants; but the Chinese of China proper are counted by hundreds of millions.²

Names given to China and the Chinese. — **The Great Wall.** — Estimating the population of China proper at 350 million, on 1,550,000 square miles, gives a density of 225 persons to the square mile; reckoning it at 400 million, the ratio is 258, and at 450 million 290. The Chinese live in a genial climate, and they extract from their fruitful soil everything that earth and water can create and the sun ripen.

¹ More exactly, if we can apply the term exact to any of these estimates, 1,554,000.

² The estimates vary between 250 and 500 million. The above are Wagner and Supan's.

China is frequently called the Celestial Empire, a term incorrectly supposed to be a translation of the common native appellation Tien Hia; but this expression signifies the Country beneath the Sky, and not the Celestial Country. The names most commonly employed by the Chinese are Hwa Kwoh, or Flowery Kingdom, and Chung Kwoh, or Middle Kingdom. By the latter they understand the region lying between the north and south and the east and west, which is naturally the situa-



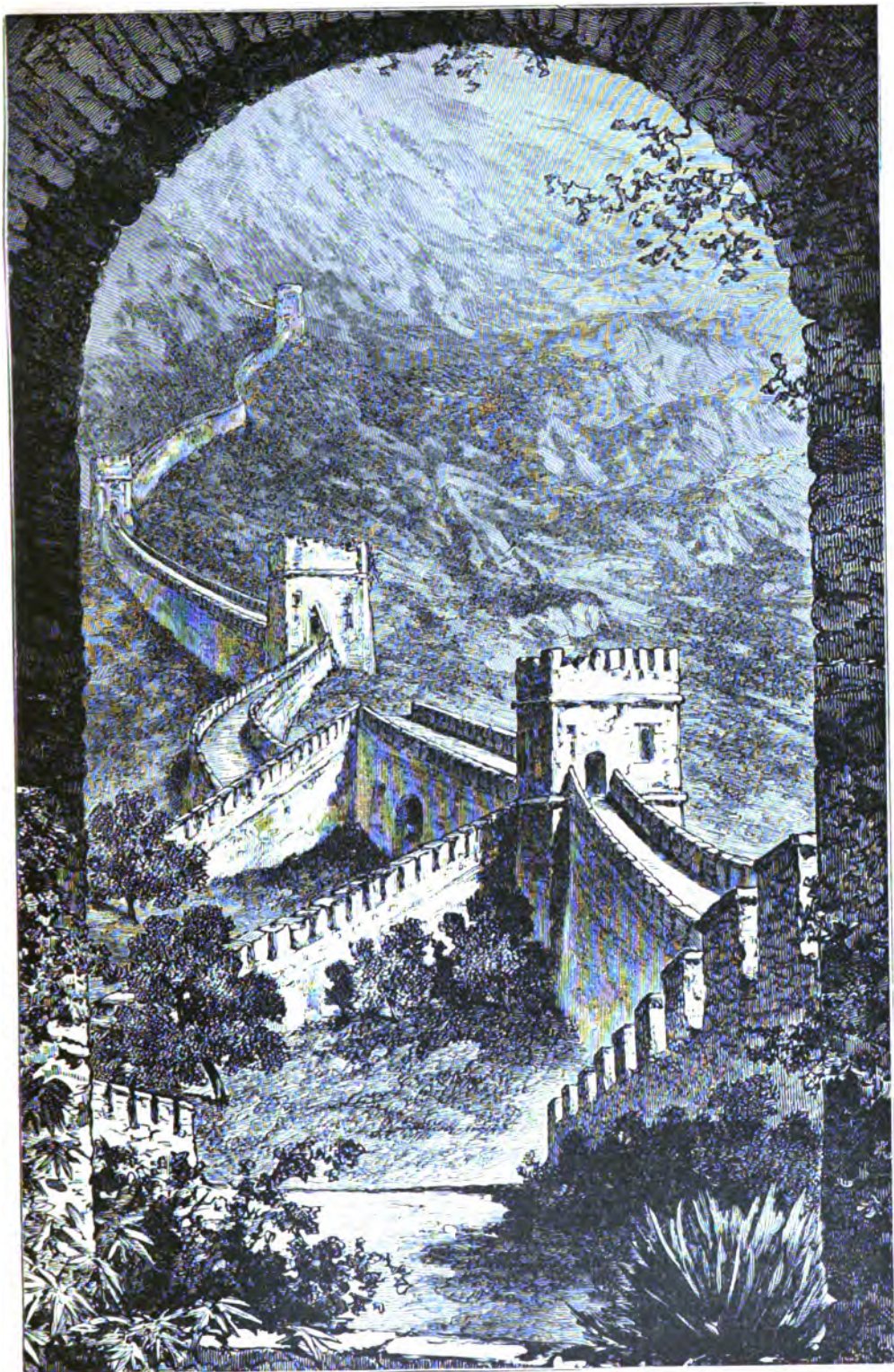
YOUNG CHINESE WOMAN.

tion of all countries, theirs included. There are other indigenous titles for this Ta Tsing Kwoh, or Great Pure Kingdom, namely: Shih-pah Sang, or the Eighteen Provinces; Sz' Hai, or the Four Seas (which does not indicate that the country is bounded by four oceans, this expression having in China the same significance as the word universe has among us). As for the name China, it has no national character. It is supposed to have been bestowed on the country by foreigners, who confounded the empire with the rulers of the Tsin dynasty, who were dethroned about fifteen hundred years since. In the same way, two imperial family names gave rise to two titles often adopted by the Chinese, namely, Sons of Han and Men of Tang.

China has a coast-line of about 2175 miles along the Pacific, on the east, and the moisture received from this ocean suffices to make the country fruitful. The mean annual rainfall is perhaps 39

inches; at Canton it is about 48 inches, but at Peking it is only a little over a half of that. In the north, the Yellow Sea penetrates into the land between Korea and the Chinese coast to within a short distance of Peking; but this distance is increasing from century to century and from year to year, owing to the deposits of alluvia in the basin.

There are few deep indentations south of the Yellow Sea; but harbors, estuaries, and coves are abundant. China is generously supplied with sheltered bays for ships; nor is the coal which gives wings to these vessels wanting. In northern China alone, the known coal-basins cover six times as great an area as those of England; the coal-



THE GREAT WALL.

districts of the Chinese Empire embrace together several hundred thousand square miles. The frontier of the empire on the west, toward the uplands, is partially undefined. On the north, China is bounded by the Great Wall, an astounding monument of human unwisdom. The Chinese did not shrink from raising this ridiculous barrier to protect their domains against a few mounted tribes of the Steppe. Millions of lives were consumed in its construction, and then the Great Wall was scaled by irreverent conquerors, to the indignation and stupefaction of the peasants, laborers, merchants, and mandarins of the Great Pure Kingdom. They had supposed themselves perfectly secure for the rest of the ages behind this parapet built by patient engineers, who had succeeded in fastening it to cliffs, in carrying it over mountains 6500 feet in altitude, and through deep defiles. There are brick towers at different intervals; but these are independent structures. The Great Wall contained 5650 million cubic feet of masonry; it was made partly of clay, and partly of brick, faced in some portions with granite, and it was 200 years in process of construction. It often gave way, especially in the clay portions, in the country of the Ortous Mongols, and it was often restored; it was afterward prolonged to the north of the Yellow Sea and beyond China proper, in Manchuria, by a strong barrier of stakes, called the Great Palisade. Such as it is, this so-called Myriad-mile Wall measures 800 leagues from the country of the upper Hwang ho to that of the upper Sungari; that is, including the Palisade. Time, which has slowly ruined so many nobler monuments, has made wide gaps in both the Wall and Palisade, and little by little the fantastic rampart is falling. It is yearly becoming less and less a boundary between China and foreign territory. The Chinese of the provinces through which it runs are rapidly invading the Mongolian valleys from which it separates them. Many a vast district, like that of the Ortous, for example, a dozen or more years ago was wholly free from Chinese influence, while to-day it is almost entirely Chinese. The indolent nomad Mongols cannot hold out against the agricultural, ingenious, prolific Chinese.

The Hwang ho, China's Sorrow.—The Yellow Earth.—The Yellow River, in Chinese Hwang ho, is appropriately named. It originates in the high pastoral regions of central Asia. In China proper, it bathes five provinces, Kansuh, Shansi, Shensi, Honan, and Shantung. On the average, its direction is easterly, but a fantastic curve of about 1250 miles carries it to the north-east into the Ortous country, a sterile steppe not in the true China; in former times the stream slumbered here in an extensive fluvial lake between two chains, the Ala-shan and the In-shan. From the Ortous country it moves due south and then is deflected eastward again beyond the confluence of the Wei, a powerful tributary, yellow like itself.

The Wei, coming directly from the westward, forms, as it were, the string of the irregular bow described by the Hwang ho; it irrigates a part of the empire where Chinese learning and Chinese civilization are supposed to have been cradled; it passes Si-ngan fu, the centre of letters in ancient times. Between the mouth of the Wei and the city of Kaifung, the volume of the Yellow River is decreased to some extent by evaporation, filtrations, and irrigation. The vast Chinese plain here furrowed and ravaged by the stream is fat and commonplace; it has no meadows, for the Chinese turn every patch of ground into a kitchen-garden, no farms, because the Chinese have a passion for crowding into the towns, and it is almost destitute of groves and even trees. China takes first rank among countries that have been denuded of their woods. The inhabitants burned and felled the forests in order to drive out the wild beasts that lurked in them; then, when the population increased, every village cut

down its groves in order to obtain tillage-ground and garden-plots. Trees are rare along the roads, but triumphal arches are scattered everywhere throughout almost the whole of the Flowery Kingdom. They are raised to immortalize great deeds, and are built of stone in the rocky districts and of brick in alluvial regions.

The over-rich Chinese plain gives birth to an overcrowded population; in many of the hamlets and small towns, and in extended quarters of large cities, a degree of poverty exists not to be met with even in the blackest of European industrial cities. In certain districts there are millions of men living in filth, clad in rags, eating infamous food, and breathing a fetid atmosphere. The streets of many a city, and especially of many a suburb, are loathsome sloughs where pigs revel in the mire. The bleared-eyed, blind, scrofulous, deformed, and leprous inhabitants suffer and groan in huts built along these sewers. Yet, notwithstanding everything, most of these families increase with vigor, like the legions of Ireland's tatterdemalions.

The Hwang ho terminates in a delta of about 100,000 square miles, which has joined to the solid land Shantung, once an isolated *massif* in the sea, reaching in its culminating point an elevation of 5069 feet. It is in the same latitude with Sicily, and formerly bore somewhat the same relation to the elongated peninsula of Korea that Sicily now bears to Italy. In 30,000 or 35,000 years the Hwang ho, which is an exceedingly turbid stream, will probably have filled up the Yellow Sea. Other lesser currents are aiding it in this work, among them the Liau ho, which is half Mongolian, and the Pei ho, which has a flow of 7733 cubic feet per second. Peking is situated in the basin of the Pei ho; it is possible that in remote antiquity this stream prolonged the upper Hwang ho. In that case, it drained the vast intermontane lake which has since become the Ortoos steppe. If the Yellow River carries more alluvia than any other stream in the world, if it is capable, as is thought, of uniting China and Japan in 350 centuries, it is because it is eroding, by means of a hundred thousand streamlets, the famous Yellow Earth¹ (the Hwang tu), which a slight shower converts into mud. The 300,000 to 350,000 square miles of this incomparable mould, which requires no fertilization, but even serves as a fertilizer itself, cover the three provinces of Chihli, Shansi, and Kansuh, and a large part of three others, namely, Shensi (about a half), Honan (the entire north), and Shantung. Around certain mountains the Hwang tu has a depth of 1000 feet, and yet these strata have been deposited atom by atom. The dust wafted down to the low country by the winds from the plateau must have been cemented into clay, in the course of ages, by its own weight, by the rains, by the juices of the earth, and by vegetable and animal decomposition. Some of the richest coal deposits of the globe are also to be found in these regions. In Honan alone they cover 20,500 square miles, and in Sz'chuen 100,000.

The clay dikes erected by the Chinese against the inundations of the Hwang ho do not always withstand the fury of the waters. When once the savage stream bursts them, it scoops out for itself channels of enormous breadth, capable of carrying the

¹ This formation, known as *loess*, presents one of the most interesting features of the physical geography of China. It has a tendency to vertical cleavage, which is explained as follows by S. Wells Williams (*The Middle Kingdom*, I. 299): "Every atom of loess is perforated by small tubes, usually very minute, circulating after the manner of root-fibres, and lined with a thin coating of carbonate of lime. The direction of these canals being always from above downward, cleavage in the loess mass, irrespective of its size, is uniformly vertical." In the perpendicular cliffs of the loess innumerable caves are dug out, and in these dwell the greater part of the inhabitants of the Hwang tu. These cliffs are 500 feet high in places; wherever they are exposed to the action of water, the loess is speedily undermined, and, falling in vertical sheets, is carried down stream and deposited in the plain or in the gulfs and seas of the coast.—ED.

entire yellow flood when it is restored to its normal proportions. The incorrigible river, China's Sorrow, has changed its embouchure nine times since China began to record its freaks, that is, for about 2500 years. Its unchained floods have moved sometimes to the north, sometimes to the south of the broad spur of Shantung, through the alluvial deposits by which Shantung has been united to the continent; it is 550 miles from the terminus of the most northern path of the capricious river, on the Gulf of Pechele, to that of the most southern, on the shore where the Yangtsz' kiang empties into the sea. The rupturing of the dikes in 1851, 1852, and 1853 opened up the northern route once more, and the Hwang ho turned back to the Gulf of Pechele, while prior to 1851 it ran to the south of the Shantung *massif*, and terminated midway between these mountains and the mouth of the Yangtsz' kiang. Millions of men perished by these overflows, partly by drowning, and partly by the famine and fevers consequent upon the inundations. Thousands of families, escaping from the stricken plain, pushed out into the valleys of Manchuria, thus extending the influence of China farther than ever to the north of the Great Palisade.

The Hwang ho has a catchment basin of about 580,000 square miles, occupied by nearly 75 million men; its volume is unknown.

The Yangtsz' kiang. — **The Imperial Canal.** — **The Si kiang.** — The term Yangtsz' kiang may mean the River of the Province of Yang,¹ or possibly Son of the Ocean. The Chinese call the stream the Ta kiang, or Great River, or simply Kiang, the River. The French call it the *Fleuve Bleu* (Blue River), although its waves are of a magnificent green above the point where it enters the Chinese plain, and, once within the plain, it becomes as turbid as the Hwang ho itself.

The Yangtsz' kiang has its sources in Mongol territory, on very lofty, cold, continental plateaus, that are as yet unexplored. Three Red Rivers unite to form it; it is named the Tortuous River,² the Golden-sand River,³ and the White River;⁴ it receives the broad Yalung, and the Hwuen or Min. Rugged, unsightly gorges conduct it from the uplands into the plain. Not more than 500 feet broad in places, but with a depth at such times of 100 or 130 feet in low water, and of 150 or 200 in the floods, it flows with terrible speed or sullen torpor, in gloomy curves, between rocks 650 feet in height, which shut out all the sunlight. After 119 miles of rapids, it reaches the plain at Ichang, and enters the soft alluvial soil, where human beings swarm like ants in the swamps and rice-fields.

In tributary China the Yangtsz' kiang flows south-east; in China proper it moves east-north-east, traversing or bordering seven provinces, namely: Kweichau, Sz' chuen, Hupeh, Hunan, Kiangsi, Nganhwui, and Kiangsu. The exuberant plain stretching from the mountains to the sea produces three, four, or five harvests yearly; the well watered, well drained, steaming soil bears mulberries in veritable forests, tobacco, rice, cotton, out of which nankin cloth is made, sugar-cane, fruits, spices, tea, and the soporific opium-poppy, which is driving out the rice-culture in many sections. The traveller in these districts often passes out of the suburbs of a city of 100,000, 200,000, or 500,000 inhabitants into those of rival cities. Legions of men dwell here in boats; they subsist on fish, or on vegetables which they raise on bamboo rafts, in gardens consisting of a few shovelfuls of mud obtained from the Yangtsz' kiang. In its course between the mountain and the sea, the stream collects the emissaries of two great lakes near its right bank, the Tungting and the Poyang,

¹ This province, at the mouth of the river, is called to-day Kiangsu.

² Murui-ussu, in Mongolian.

³ Kin-sha kiang, in Chinese.

⁴ Peshui kiang, in Chinese.

and, between the two, it receives the river Han, a large tributary on the left, which is navigable for steamboats during the freshes for a distance of 300 miles; the Han comes from the most historic part of China, as well as from the Yellow Earth region, through a valley teeming with inhabitants, and in a channel lined with junks. The Tungting is an immense sheet of miry water on which the reeds and rushes of the marsh are steadily encroaching; its flat shores advance or retreat according to the rainfall; the banks of mud and the islands in the lake are sometimes obliterated by the waves, and sometimes swell above them. The Tungting embraces an area of 2000 square miles, on the average, and drains a basin of about 77,000 square miles; it is scarcely more than six feet deep in summer, but a great rise takes place when the two large



A CHINESE WOMAN WITH BOUND FEET.

tributaries (one on the west, the other on the south) are at high water, and when at its annual freshet the Yangtsz' kiang itself forces back the outlet, and enters the lake as a counter-current, discharging into it its surplus waters. The Poyang covers 200 square miles less than the Tungting, to which it bears a resemblance. Beds of reeds and rushes and alluvial deposits are slowly but surely connecting its shores; it receives powerful affluents, and it reaches the Yangtsz' kiang by a short emissary which sets toward the lake or toward the river according to the season. Near Nanking, 225 miles from the sea, the ebb and flow of the tide begins to be felt; the channel is broad, with depths of 130, 160, and even considerably over 300 feet, then the stream enters its delta. At high tide, the mire at the mouth is covered with 10 to 15 feet of water, thus giving passage to heavy vessels which could not otherwise enter.

The Yangtsz' kiang (3100 miles) drains a basin of 726,000 square miles, occupied

by 200 million people. In all probability there are not more than three other streams in the world with an equal volume, namely, the Amazon, the Congo, and the Rio de la Plata. The exact volume of the Yangtsz' kiang is not known; the low-water flow is estimated at 459,000 (?) cubic feet per second, and the yearly mean at 775,000. Like the Hwang ho, the Yangtsz' cuts the Grand Canal, called the Yun ho or Transit River. This water-way is nearly 1250 miles long and 200 to 1000 feet broad; when it was in good condition, it bore thousands of junks or Chinese vessels, countless skiffs, villages of boats, and floating cities. It connects, or, rather, it once connected, Peking with the centre of the empire, and at the same time with the rice-growing provinces of the south. But since the inflow of the Yellow River failed it has been incapable of transporting a boat from its starting-point on the south to Tientsin, its northern terminus. With broad breaches here and there, invaded here and there by mire and sand, here drained, there filled up, and elsewhere overflowing as a marsh, it is no longer a national highway. There are many canals and numerous navigable rivers in China, but very few public roads.

The Si kiang, or Western River, is the chief current in the south, but it is inferior to the Blue River and even to the Yellow; it rises in Yunnan, and traverses the two provinces of Kwangsi and Kwangtung. When it reaches its delta of 3000 square miles, after an easterly course of 900 miles, it pours its floods, which are swollen in summer by the monsoon rains, into numberless channels; the intricate net-work of these branches is favorable to the movements of the pirates, whose numbers are at present, however, diminishing. The junks of Canton are ranged along one of the branches of this delta, which opens on the waters of Macao, a so-called Portuguese island, and of Hongkong, a nominally English island. The deeply indented seaboard between the mouths of the Si kiang and those of the Yangtsz' pertains to the provinces of Fuhkien and Chehkiang.

The Chinese.—The Chinese are an exceedingly mixed people, exhibiting wide differences as to complexion, physique, and physiognomy, but total strangers to beauty, as Europeans understand the term. They shave their heads, leaving a queue of hair which is smoothly plaited and hangs down their backs; their cheeks and chins are almost beardless, their noses flat, and their eyes small and oblique. The race is supposed to have formed slowly, like everything else in China. Elements of all sorts entered into it, the chief of which, we can well believe, were derived from the aborigines, or so-called aborigines, whom the Chinese look down upon to-day,—from the Miaotsz', the Si-fan, and twenty other savage nations of the highlands, who were dreaded and scorned by the rural as well as by the urban population of the plain. These "children of the soil" allied themselves with all the surrounding peoples, with the inhabitants of the Great Plateau, with the Mongolians, Turks, Tibetans, and Manchus of the north, with the Malays of the south, with Burmese, and with nations which are now seemingly extinct. Among the various names which the Chinese have adopted, there is one which signifies the Hundred Families. This title possibly commemorates their diversity of origin.

The Chinese are patient and sagacious. They are never rebuffed by anything, but accommodate themselves to all sorts of surroundings. They seldom exercise force, but accomplish their ends slowly and silently. Opium-smoking and gambling constitute the chief recreations of the Chinese masses. As a nation, they are unrivalled in practicality. The guiding virtue of the race since its infancy has been the love of family, which takes priority over every other sentiment. And this love, broadening

out, develops into fidelity to the Chinese State, which is the "great family," and to the emperor of Peking, who is the "father of the people." With the Sons of Han, filial duty is not satisfied with devotion to father, grandfather, and great-grandfather, but they worship their ancestors, even to the remotest generation. They seem to have a passionate love for death; they delight in making preparations for the event long in advance; their first care is to buy a padded bier, and they sometimes keep their coffins exposed to view in the best room of the house. When war or an epidemic interferes with the regular course of interments, the biers are ranged along the roads, the dead within, until the restoration of that quiet which is indispensable to the celebration of the funeral rites. The chief care of the Chinese dwelling in a foreign country is that his body shall be carried back to China in case he dies away from his native land; his last prayer is to be buried in the sacred soil of the Middle Kingdom.

The burial fields are vast here, where the prolificness of the inhabitants is propor-



A CHINESE CART.

tioned to the exuberance of the Yellow Earth, and where, for that very reason, death makes terrible havoc. As the fields of the dead are inviolable, and as every inmate has his place secure for centuries, the entire territory of China would, in the end, be one immense cemetery were it not that, from time to time, the advent of a new dynasty removes the prohibition which protects these last abodes. When a new family ascends the throne, the old graveyards are turned into cultivated fields, and new ones are started, which spread, in their turn, until the downfall of the dynasty, and sometimes still longer. When the reigning Manchu family came to the throne, a solemn oath was taken not to celebrate its advent by ploughing up the cemeteries; the oath was not violated.

Chinese Emigration. — The Chinese are said to have numbered 37 millions in 1644. Admitting the truth of estimates, there were 142 million in 1742, 268 million in 1776, 362 million in 1812, and 415 million in 1842. At this rate of increase they would number 450 million to-day; the Russian missionaries even estimated them at more than 500 million twenty years ago. But these figures are doubtless much too high (see page 353). Every year, in spite of prohibitory laws, in spite of adverse public

opinion, swarms of inhabitants fly from the buzzing hive of the Great Pure Empire; they settle down on Tonquin, Anam, Cochin-China, and Siam, on the Philippines, Java, Sumatra, the Moluccas, all the Sundas, and all Melanesia; they are nearly all without wives, and almost all come from two southern provinces, Fuhkien and Kwangtung (Canton). As they emigrate without Chinese women, they mix with the races of the countries to which they emigrate. And they take possession of everything, — of agriculture, gardening, mines and factories, banking, the crafts, domestic service, and traffic.

The Chinese have invaded California and other parts of the United States; they emigrated there in such numbers, they performed so much of the labor, they did it so well and so cheaply, that the government has passed laws shutting them out of the country. They have also been forbidden to land in Australia, because their competition in every trade and in every sort of business was so much dreaded by the Australians. Their labor is sought in many tropical regions where the negro, stretching himself in the sun, is resting from centuries of slavery, as, for example, in Cuba and the other Antilles, in the Guianas, in Brazil, in Peru, and in the islands of the southern seas.

The Chinese Language. — Pigeon-English. — The Chinese language is divided into sister dialects which are as closely related to one another as are the Neo-Latin French, Spanish, Italian, and Portuguese. The other dialects are steadily falling back before the court idiom of Peking, the *Kwan hwa*, or mandarin dialect, the most impoverished of all human tongues. It is monosyllabic, and destitute of inflections or even of agglutination. The spoken language contains less than 500 syllables, but these have a variety of significations according to the *shing*, or tone, in which they are pronounced. Certain dialects in the south are much richer than the mandarin, possessing 800, 900, and even nearly 1000 syllables. The written language is shackled by so-called symbolical characters which have ceased to image the ideas; the signs, which were at first roughly representative, have become a tangle of lines, which bid defiance to the best of memories. There are 41,449 of these symbols; of these, 214 are termed determinative or radical characters. One or more of these determinatives enter into the composition of every character in Chinese. Two lifetimes would hardly suffice to exhaust the science of Chinese reading, but with a few thousand signs one can make himself understood everywhere. The Chinese write with a brush, in vertical lines, from top to bottom, and from right to left. In spite of the poverty of the idiom, a vast literary structure has been reared. The imperial encyclopædia, which will comprise all the great national works, will embrace 160,000 volumes.

As few Europeans learn Chinese, and few Chinese study European languages, a singular mongrel vernacular has grown up in the commercial ports, as the medium of traffic and ordinary intercourse; this droll lingo, known as pigeon-English, combines Chinese monosyllables, English terms, and much corrupted Portuguese terms. Pigeon-English already has its proverbs, its songs, its odes, and its literature.

Religion. — Government. — Among the upper classes of the nation, a sort of practical morality prevails, which has been drawn from the teachings of Confucius, a philosopher whom the Chinese revere as the greatest of men, but who was nothing more than the prudent counsellor of a very ordinary people. The masses profess Buddhism, under the title of the religion of Fo, and the Chinese Buddhists can be counted by hundreds of millions. A low kind of morality, a multitude of superstitions, a few obscure relics of the adoration of the forces of nature, a respect for

the spirits of the sky, earth, and water, and, above all, the worship of their ancestors, constitute the code of faith of the Chinese masses. Among men of leisure, many follow the teachings of the philosopher Lau-tsz'. These teachings are suited to the Chinese disposition, for they inculcate the wise and moderate seeking of comfort.

In the north, east, and south-west of the empire, chiefly in Kansuh and in the mountains of Yunnan, dwell 20, 25, 30, or even 35 million Mussulmans (the actual number is not known); they are superior to the rest of the Chinese because they are not addicted to the opium habit. Many of them are also distinguished from the other children of Han by their nobler features, by their straight or aquiline noses, and large, open eyes, — a heritage from Arabic ancestors who were summoned to China in the eighth century by an emperor who resided at Si-ngan, the capital at that time. There are a few hundred thousand disciples of other religions, including Jews, Christians, and Fire-Worshippers. Toward the end of the sixteenth century and the beginning of the seventeenth, the Jesuits undertook the conversion of China, but their missions perished, and when the blood of the martyrs ceased to flow, there was not a believer in Christ among the sons of the Middle Kingdom. The Christians at present to be found in the empire have been recently converted through the labors of Catholic or Protestant missionaries.

The yoke imposed on the Chinese by the government is burdened with the exactions of a bureaucratic aristocracy, the members of which are called the *kwan*, or mandarins; the latter word, which is essentially European, is derived from the Portuguese *mandar* (to command). The mandarin class, with its intricate divisions and subdivisions, is bound by routine and red tape, as is the case always where appointments and promotions depend upon State examinations; but, directing the affairs of an empire some thousands of years old, the Chinese officials have a keen sentiment of the sanctity of ancient customs, and at the same time they possess the Chinese duplicity and patience. They contend patriotically, shrewdly, and obstinately for the maintenance of the integrity of the Middle Kingdom, which is much menaced to-day from within and without. Within, secret societies and political parties are undermining the foundations of the colossal structure. The recent Tai-ping rebellion shook it so mightily that, but for European support, it would certainly have fallen to the ground in shapeless ruins. And it is by no means certain that the blood of the 50 million men who perished in this war was sufficient to solidly cement the new foundations. The Mussulman revolt, also recent, likewise made the trembling edifice quake; the Mussulmans were subjected but not subdued, for they are proud of their faith and of themselves, and they despise the Chinese rabble. Beneath these social or religious struggles, in the torrent of violent passions, or the slough of venal passions, throbs the soul of ancient peoples, whose names have been submerged for a hundred generations in the vast ocean of the "Pure nation." Without, Japan proclaims her ambitions; England can touch the empire whenever she chooses, through Burmah; France already touches it in Tonquin, and Russia threatens it along a frontier of hundreds upon hundreds of miles. But the only external foe which China fears is Russia.

Cities. — The eighteen Chinese provinces are divided into *fu*; the *fu* are subdivided into *chau*, the *chau* into *hien*, and the *hien* into *pao* or *tu*, that is, into communes.

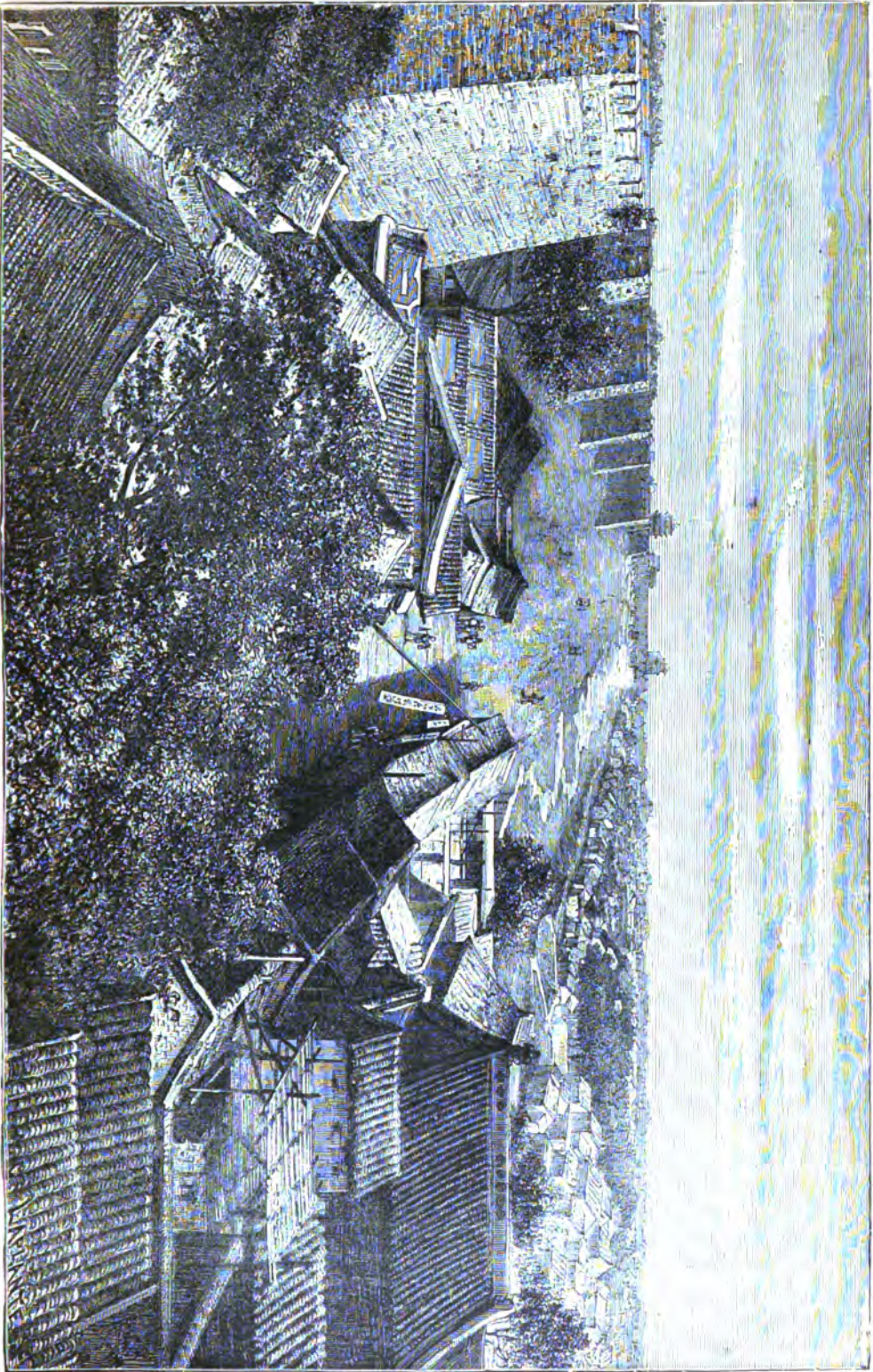
The Chinese Empire ranks first among all the powers of the world in the number of cities containing over 100,000 inhabitants. The large Chinese towns always comprise three distinct cities, one silent, one noisy, and the third poor and filthy. All these are equally heaped with ruins made by the civil wars of the third quarter of the

present century, — *débris* which Chinese placidity abandons to its fate. The silent city is the Tatar or imperial city; it is protected by a wall with so-called monumental gates, it is peopled by mandarins and their attendants, and by generals and their soldiers. It encloses the citadel, the barracks, and the government and treasury buildings, but it has no shops nor stores, and its deserted streets stretch out between low walls, bordering gardens and courts. No trade is carried on here, except the traffic in consciences. The city might be called austere, if anything Chinese could merit this epithet. The second city is Chinese, and it too is walled; there is nothing monachal or military in its aspect. It is busy with traffic in every imaginable commodity. In certain narrow streets, there is scarcely room for the multitudes of passers-by; there is nothing to be seen but stores, flags, posters, displays of goods, pedlers and business men; the latter are not quite as excited as in a European or American city, but the great crowds are very noisy. Slimy ditches and filthy pools disfigure the richest quarters. No noble monuments speak of art, beauty, or the ideal to the mob of buyers and sellers; the rich man is absorbed with his cares, his calculations, his pleasures, and the advancement of his selfish interests; the poor man struggles for the handful of rice necessary for the support of his family. The third city is the suburb, which swarms with laborers, and teems with the unfortunate and infirm; here are a hundred barracks to every comfortable dwelling, and a thousand malodorous sinks to every clean square. This city is not walled in, but scatters its wretched, filthy habitations toward the four winds of heaven.

The capital of China, though not its chief city, is Peking, a town entirely devoid of splendor, notwithstanding its marble bridges; it lies at an altitude of 121 feet, on sub-affluents of the Gulf of Pechele. The name Peking, signifying Northern Capital, as opposed to Nanking, or Southern Capital, is as unfamiliar to the neighboring rural population as Lutetia is to the villagers living in the vicinity of Paris. The two names in actual use are, in government language, Shuntien fu, and in common parlance, Tsing-cheng, that is, the City of the Residence. The population has been placed at 2, 3, 4, and 5 millions, and an estimate of even 10 millions has been hazarded, but it apparently does not exceed 500,000; the city has an area of 24½ square miles. There is nothing to admire in its one-story wooden houses roofed with tiles, in its streets lined with barracks, in its irregular vacant spaces, extensive gardens, enormous palaces, and queer temples. The temperature is high in summer, but it is so cold in winter that the annual mean is not much above 50° F., and yet Peking is in the latitude of Coimbra in Portugal, and Valencia in Spain.

Tientsin (*i. e.*, the Heavenly Ford) lies not far from the Gulf of Pechele, on the Grand Canal and on the Pei ho, which is navigable for large junks; it is indebted to European and Chinese commerce for a rapidly growing population, now numbering a million. It already outranks Peking. Chihli (*i. e.*, Direct Rule), the province in which Peking and Tientsin are situated, contains three other cities having a population of over 100,000; the province of Shantung (*i. e.*, East of the Hills), bordering Chihli on the south, includes five such towns, all of which are destitute of attractions; one, Wei, has 250,000 inhabitants.

None of the cities of Shantung has a European fame, but Kiangsu (named from the first syllable of the capital, Kiangning, joined to Su, part of the name of the richest city, Suchau) contains several celebrated towns. Shanghai (pop. 345,000), on the Hwang-pu, a deep channel communicating with the embouchure of the Yangtsz' kiang, has become one of the chief emporiums of commerce, being surpassed in Asia



A VIEW OF THE FORTIFICATIONS OF PEKING.

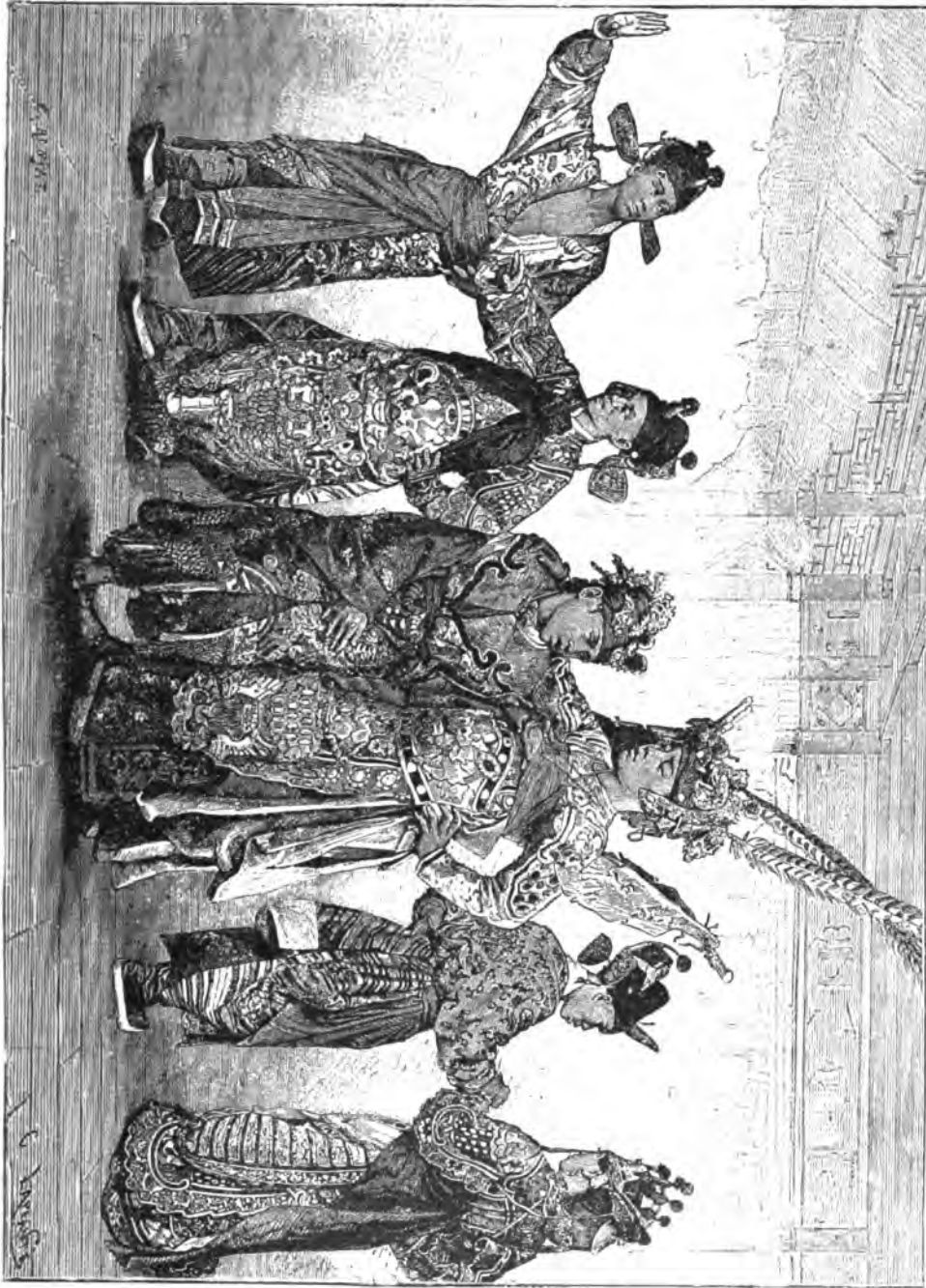
by Bombay alone; the principal exports to foreign countries are tea and silk; the English have the upper hands here. — Suchau (pop. 500,000), the Chinese Venice, built on islets in the eastern part of the Ta hu (Great Lake) and on the Grand Canal, rises out of a sea of rice-fields; before the bloody Tai-ping revolt, it was the centre of good society, the city of costly luxuries, of elegance, of refined pleasures, of the best theatres, of the noblest literature, the most perfect language, and the purest accent, and it was also famous for the beauty of its women. — If Yangchau, near the left bank of the Yangtsz', and bordering the Grand Canal, really contains 350,000 inhabitants, it is over twice as large as the world-renowned Nanking (pop. 150,000); Nanking was once the government seat of the empire; at that period it was the most populous, the richest, and the most industrial city in the world. It was still a powerful city when, in 1864, it was destroyed from roof to foundation stone, and all the Nanking inhabitants were massacred, by the national army which had just seized the city from the Tai-pings. It revived, however, and is now once more a flourishing city.

In the province of Chehkiang (*i. e.*, Crooked River), which continues the coast south of Kiangsu, the capital, Hangchau, occupies the southern terminus of the Grand Canal. It is situated near the gulf of its own name, and not far from the charming lake, Si Hu; it was formerly one of the wonders of China, and contained a population of two million. Its present 500,000 or 800,000, or perhaps 1,000,000 inhabitants, are crowded around a junk-encumbered port. Hangchau is almost as famed as Nanking, and in amusements it competes with the "Chinese Venice." — On the southern shore of the Gulf of Hangchau, Shauhing (pop. 500,000), formerly much more populous, rises in a densely peopled alluvial district near the viaduct of its own name. This incomparable viaduct, more than ten centuries old, was constructed in a marsh which has since been drained, and it is still perfectly preserved. — Ningpo (pop. 250,000) looks out on the sea which beats the 400 islands of the Chusan Archipelago.

South of Chehkiang, Fuhkien (*i. e.*, Happily Established), the province which with Kwangtung furnishes almost all the Chinese emigrants, abounds equally in enormous cities. Fuhchau (pop. 630,000), on the northern side of the River Min, thirty-four miles from its mouth, lies at the foot of a granitic mountain 2887 feet high; it is engaged in the shipment of emigrants and in the trade in black tea. — The once excellent harbor of Changchau (pop. 500,000) is now ruined by sand obstructions, and its commerce has been transferred to the neighboring city of Amoy (pop. 100,000). Amoy also ships bands of Chinese to foreign lands.

Kwangtung (*i. e.*, Broad East), south-west of Fuhkien, contains the most populous of the Chinese cities, namely, Canton (pop. 1,600,000); it is situated on the Pearl River, one of the innumerable channels ploughed in the plastic delta of the Si kiang. Ten thousand boats, anchored along the river, which is fully five-eighths of a mile broad at this point, bear an entire floating city, where people live and die, buy and sell, suffer and enjoy, just as in any city on the solid land. The mediums of trade in Canton are the southern Chinese language and pigeon-English. It was in Canton that this hybrid originated. The commerce of Canton is less active than at the period, still recent, when the trade of Shanghai was unimportant, but it is the principal industrial town in China. Descending the river from the city, we enter the estuary, the entrance to which is guarded by Hongkong and Macao; ascending the stream, we soon reach Fuhshan, a city of 500,000 souls.

Continuing the tour of the empire, but quitting the hem of the sea, and pushing into the interior, the first province encountered is Kwangsi (*i. e.*, Broad West), on the



CHINESE TRAGEDIANS.

frontier of Tonquin, and traversed throughout its entire length by the Si kiang. The province contains only one large city, Wuchau fu (pop. 200,000), on the Si kiang.

The next province is Yunnan (*i.e.*, Cloudy South), a metalliferous region, with huge mountains and ravines; it borders Tonquin and Burmah; it possesses no city of 100,000 inhabitants.

Sz'chuen (*i.e.*, Four Streams), a frontier province north of Yunnan, contains Chingtu, Chungking, and Suchau. Chingtu (pop. 800,000), in the basin of the Min, a large tributary of the Yangtsz', on the left, lies at an elevation of 1503 feet, in an extraordinarily densely peopled plain of 2300 square miles, in which are about 30 powerful cities. There must be fully 4 million human beings in this plain. Chingtu is more cleanly and more attractive than the other large Chinese towns; its polished, accomplished, lettered, and artistic inhabitants are the Parisians of the Middle Kingdom. Chungking (pop. 700,000), a river port encumbered with junks, borders the Yangtsz' kiang, in the form of an amphitheatre. Suchau (pop. 300,000) is situated at the confluence of the Blue River and the Min. — In Kansuh (*i.e.*, Voluntary Reverence, made by uniting the names of Kanchau fu and Suh chau), north of Sz'chuen, Lanchau, on the banks of the Yellow River, has a population of 500,000.

Shensi (*i.e.*, Western Defiles), west of Kansuh, possesses the illustrious Si-ngan, or Peace of the West, which was long the capital of China. Seated on the banks of the Wei, an affluent of the Hwang ho, Si-ngan is the great city of the Yellow Earth region; and, with its million of inhabitants, it is the second city of the empire.

In Shansi (*i.e.*, West of the Hills), east of Shensi, the chief city, with 250,000 inhabitants, is called Taiyuen fu. The Fän ho, a tributary of the Yellow River, passes through it.

These dozen provinces form the girdle of China. There are six others in the interior of the Great Pure Empire. Honan (*i.e.*, South of the River) lies south of Shansi; its capital, Kaifung (pop. 150,000), on the Hwang ho, now a decayed city, was the metropolis of China for twenty-five years (from 1280 to 1305). Its plain is exposed to the inundations of the Hwang ho.

Hupei (*i.e.*, North of the Lake), south of Honan, occupies the centre of China; it surpasses Honan itself in productiveness. Three towns blending into each other form a colossal city, equal, if not superior, to Canton: Hankow, Wuchang, and Hanyang pile up their houses and hovels on both banks of the Yangtsz' kiang, and on the mighty Han. Together they constitute the teeming emporium of central China. The plain in which they are situated is studded with lakes, which were formerly arms or expansions of the Yangtsz'. All together, their inhabitants number 1½ million; they are said to have had a population of five million, or even eight million, in 1850, before the Tai-ping rebellion.

In Hunan (*i.e.*, South of the Lake), south of Hupei, the commercial town of Siangtan, on the Siang, a vast affluent of Lake Tungting, has a population of a million. Changsha (pop. 300,000), lower down on the same stream, is the capital of the province.

Kweichau (*i.e.*, Noble Region), west of Hunan, embraces none of the prodigious cities so common in China. The same is true of Nganhwui (thus named by combining the first words of Nganking and Hwuichau, two large cities of the province), although it borders the Yangtsz' on the route between the chief port of the interior (Hankow, Wuchang, and Hanyang) and the chief seaport, Shanghai.

The only remaining province is Kiangsi (*i.e.*, West of the River), traversed from

south to north by the broad Kan kiang, which fills Lake Poyang. Nanchang (pop. 300,000), the provincial capital, lies on the Kan, near the southern shore of Poyang Lake; it carries on an extensive trade in famous porcelains.

Chinese Islands: Formosa, Hainan. — An island 250 miles long by 60 broad, with an area of nearly 15,000 square miles, rising opposite Fuhkien and Kwangtung, forms a department, called Taiwan; it is separated from the mainland by a strait 80 miles wide in the narrowest portion, and only 200 to 330 feet deep. The population is supposed to number 3,600,000. The Portuguese, who discovered this island, found it so charming and imposing that they called it Formosa, or the Beautiful, a name which it still retains. Superb mountains, here limestone, there volcanic, reach an elevation of 12,830 feet (if we can trust the more than imperfect maps). They do not divide the island equally, but plunge rigidly into the waves on the side toward the open sea, while they slope gently toward the strait, facing Fuhkien. It is on this western slope, where there are broad plains, and valleys, and long rivers, that the Chinese immigrants have settled.

Before the arrival of the Chinese, Formosa was occupied by small tribes, which are still known as the wild men, or Song-fan. It can readily be believed that the aborigines of the island resemble those of the Philippines, and that there are certain tribes here of the Tagal type, and, in the remote gorges, Negritos, Alfures, and Igorrotes. Whatever may be their origin, their race is run, for the Chinese colonies from Fuhkien and Kwangtung, though scarcely six or seven generations old, already cover the entire island. Taiwan fu, the capital, a wholly Chinese city, near the western coast, contains a population of 70,000.

Hainan, a somewhat smaller island, comprises an area of 14,000 square miles, with 2½ million inhabitants; the name Hainan signifies "in the south of the sea." It constitutes the most southern department of China, Kiungchau. It guards the entrance to the Gulf of Tonquin. But for the shallow Straits of Luichau, scarcely 12 miles broad, it would form a part of the peninsula of Kwangtung, to which it does in fact belong. Hainan is not as well known as Formosa, and it lacks Formosa's imposing beauty; its chief mountains do not exceed 6000 to 6500 feet in altitude, but nature here has all the opulence of the tropics. The northern part of the island is cut by the 20th parallel, while the 25th passes over the north of Formosa. The 500 miles of coast are occupied by the Chinese, who have been established on the island for twenty centuries; they came, like the Chinese of Formosa, from the provinces of Kwangtung and Fuhkien; they closed around the autochthonous inhabitants, depriving them of all importance. These savage tribes are to-day weak, poor, despised, and broken, and all together far inferior in numbers to the "Sons of the Moon." The capital, Kiungchau, a city of 200,000 souls, rises six or seven miles from the Straits of Luichau.

Macao. — This old Lusitanian fortress, garrisoned by Portugal since 1557, prides itself on having 4500 Europeans to nearly 65,000 Chinese (on a territory of 12 square miles); but a large share of the Europeans have in their veins as much Asiatic blood — Indian, Malay, or Chinese — as Portuguese. They are undersized, of swarthy complexion, and with a Malay rather than a Chinese or European cast of features. Many of them are interpreters in the various languages of this quarter of the globe. It is from their patois, which resembles, more or less closely, the language of Minho, of Beira, of Estremadura, and Algarves, that pigeon-English derives its principal elements. Macao is on a small peninsula projecting from the island of Hiangshan, at the mouth

of the Si kiang. It retains only a faint reflection of the splendor of those days when it was the centre of the commerce between Europe and China. The activity of its English rival, Victoria, on the island of Hongkong, dealt it the last and fatal blow.

Hongkong.—This Switzerland of 32 square miles, with an elevation of 1768 feet, is composed of granites, schists, and volcanic rocks; it lies off the coast of Kwangtung, in a sea swept by destructive typhoons. When it was ceded to the English, in 1841, there were fishing hamlets all along the shores, and a few peasants occupied certain of the glens. About 195,000 inhabitants, nearly all Chinese, dwell at present on this block, which is detached from the continent by a channel only 8200 feet broad. Nearly the entire population, consisting of merchants of every grade, commission-agents, porters, sailors, and laborers, is concentrated in the capital, Victoria, which is an important commercial town. There are 4000 Europeans, mostly Portuguese, or rather Lusitanian half-castes.

VASSAL COUNTRIES.

Manchuria.—The area of this country is approximately fixed at 370,000 to 380,000 square miles, and the population at about 7 Millions. The term Manchuria is a misnomer, for the inhabitants number less than one Manchu to twenty Chinese. Roughly speaking, Manchuria is a grassy, wooded, rainy district, stretching from the lofty Mongolian plateau to the Pacific coast; but half of this coast has belonged to the Russians since their annexation of the portion out of which their Littoral Province was formed. The climate is cold for the latitude, and Manchuria possesses all the grandeur of the north; here are magnificent pasture-lands, fruitful soil, and limitless expanses of forest, with thick-furred tigers, superb panthers, black bears, and wolves. The rivers issuing from the snow-capped, limestone Long White Mountains (or Shan-a-lin, 8,025 feet), and from the volcanic Khingan, form two mighty currents, — the Liau ho, on the south, and the Sungari, on the north.

The Liau ho of the Chinese, the Sira-muren or Yellow River of the Mongols, crosses the Great Palisade, and flows turbidly into Liautung (east of the River Liau) or Shingking, which may be regarded as a nineteenth province of China proper. Its deposits in the Bay of Liautung have already greatly diminished the area of the Gulf of Pechele. The white Sungari is much longer and broader than the Liau ho; it equals the Amur, and even outrivals it in the spring, when the sun heats the snows of the Long White Mountains. Its mother-branch is the Nonni, called by the Chinese the Si kiang (Western River), like the stream of the two Kwangs at the other extremity of the empire. When it approaches the Amur, at least 930 miles (following the thread of the waters) from the city of Kirin, where it begins to be navigable for boats drawing 3 feet of water, the Sungari has an average breadth of 6500 feet.

The Manchus, who belong to the race rightly or wrongly called Mongol, scaled the Great Palisade about two hundred and fifty years ago, and, descending into China by the Liau ho, they established the dynasty which rules there to-day; but the Chinese, more formidable in peace than in war, at once began a silent invasion of Manchuria. Almost man by man, natives of Shantung, Chihli, and Shansi pushed out

into the Manchu land; there they have colonized richly, while the Manchus have ruled barrenly in China. The Manchu tongue became the official language at the court of Peking, and in the higher government bureaus, in the provinces as well as at the capital; but nothing now remains to it except this artificial life and its use by 400,000 men in Manchuria itself. Moreover, these 400,000 men understand Chinese. Manchu, which is a much nobler language than Chinese, is regular, rich, sonorous, and sweet; it never admits the occurrence of two successive consonants in the same syllable.

Manchu Manchuria is disappearing. It was impossible that a country of its size should remain unpeopled by the side of an empire of three, four, or five hundred million men. Even a feverish atmosphere would not have preserved it from invasion; but Manchuria is healthful, and its life-giving climate is one of the chief attractions to settlers. If Russia had delayed the annexation of the lower Amur for a time, the Chinese Empire would have extended its borders to the birches of Okhotsk.

Not only is the Manchu tongue superior to the Chinese, but the honest, benevolent, upright, pastoral Manchus are of a far higher type than the polished, cunning, equivocal, clever multitudes that have overrun them, from the first to the last of their eight banners or tribes.—The division of the Manchu nation into eight banners is a mere historic relic; the actual division of the country is made in Chinese fashion, into provinces, *fu*, *chau*, and *hien*.

The capital, Mukden (pop. 180,000), or the "Flourishing," the Shin-yang of the Chinese, is likewise the capital of the province of Shingking.—Kirin (pop. 120,000), capital of the province of the same name, lies on the Sungari, not far from the mountains in which the river rises. The Sungari is a thousand feet broad at this point.—There is no large city in Tsitsihar, the northernmost of the three provinces into which Manchuria is divided.

Korea.—Korea, by the corruption of two Chinese words, has been called by the natives Chosŏn (or Tsio Sien) for about five hundred years;¹ that is, since the advent of the present ruling family. Tsio Sien, a Chinese term slightly transformed to suit the Korean tongue, signifies the Morning Calm; and Korea is, in fact, between China and the rising sun. It is a peninsula of 85,000 square miles, with perhaps 10½ million inhabitants. The Russians are suspected of coveting this long strip of land, which runs out from Manchuria like the beak of a bird of prey. Korea curves around between the Yellow Sea and the Sea of Japan. But for its climate, which is very cold for the latitude, it would bear a striking resemblance to Italy. It recalls the European peninsula by its shape and direction, its prolongation into an inland sea, and its division into two basins, which are traversed by small coast-streams; moreover, the western basin is the broader of the two, and lies at the base of a mountain-chain analogous to the Apennines. But Korea is not warm and genial; it has not the skies of Genoa, of Naples, nor of Palermo. The climate is, nevertheless, milder than in Manchuria and northern China, the winters are less severe (except, perhaps, when the terrific north-east winds prevail), and the south-west monsoon brings beneficent rains. Snows are abundant in Korea, even in the south, under the same parallels as Biskara, Algiers, Malaga, and Palermo; the tem-

¹ Mr. Percival Lowell, in his work entitled *Chosŏn: The Land of the Morning Calm* (p. 402), tells us that the name Chosŏn is at once the oldest and newest name of the peninsula. "It was so called previous to the tenth century, and the old name was revived on the coming in of the present dynasty, in 1391. In the interim, the kingdom was called Koryŏ, whence our name Korea."

perature sometimes falls as low as -13° F.; and over the entire country torrential rains deprive the summer of its greatest heat.

Of the two seas whose subdued chant lulls the littoral Koreans to sleep, the eastern, the Japan, almost dashes against the mountains. It is a deep sea, with excellent harbors on its rugged shores; there are few islands off the coast. On the south and west, however, in the Hwang hai, or Yellow Sea, fronting a seaboard

where the tide rises to prodigious heights, clusters of small islands, islets, and reefs are numerous; it is from these archipelagoes that the Korean despot styles himself King of the Ten Thousand Islands.

The loftiest mountain whose altitude is certainly known is not over 8200 feet high; more elevated peaks are thought to exist between the 40th and 42d parallels. Though Korea may not rear any giant masses, the surface is mostly in uplands, with vast pine and fir forests, especially in the north. From these countless eminences, from the woods (which abound in bears, panthers, and small, ferocious tigers), from the summer rains and winter snows, numberless torrents are formed, and the Korean is never at a loss for water to flood the rice-fields which furnish his subsistence. The Ya Lu kiang, or Ap Nok kang, or the River of the Duck's Green, the largest of all these streams, has its sources in the Shan-a-lin, the



A KOREAN.

reverse slope of which cradles the Sungari; it is navigable for boats for 180 miles.

The Korean nation is evidently formed from a mixture of several races. A great variety of types exists in the peninsula; not only do we find Mongol, Manchu, and Chinese features, but faces of the Aryan cast. And it is possible that some of the roots of the nation extend their ramifications into what is known as the White race. Generally speaking, the Koreans resemble the Chinese and Japanese, though they are more robust, of larger stature and of nobler carriage. They are energetic, strong-limbed, and not afraid of fatigue. Their idiom is non-monosyllabic, and even agglutinative; its primitive character has been much altered through contact with Chinese. Korean civilization and learning were derived from China, and the Chinese language has consequently exerted a deep influence on the Korean, which was originally very

unlike that of the children of Han, and, in fact, related to the dialects of northern Siberia and the Ural regions. An absolute monarch rules over this Buddhist nation, whose literature, science, manners, etiquette, and government are thus purposely moulded on the Chinese model; it is a pity that the Korean people, who are said to be full of force, sense, dignity, and courage, did not follow the dictates of their own genius.

The capital, Söul (pop. 150,000), is built on the banks of the Han kang, which is not navigable for ships as far as this point, and which empties, a little farther down,



A KOREAN PALANQUIN.

into the Yellow Sea, opposite the extremity of Shantung. There is a scarcity of great cities in the peninsula, even in the densely peopled south. The Koreans live mostly in hamlets.

Mongolia and the Mongols; Gobi, Kōkō-nor. — It is doubtful, owing to the atrocious climate, whether there are 2 million men on this soe, of varying altitudes, which embraces 1,304,000 square miles. The Mongolians are not subjects, but allies, of China. These descendants of the formidable followers of Jenghiz Khan are dreaded by the people of the Celestial Empire, although they look to the Chinese emperor as their chief, and pay him a yearly tribute of horses, camels, sheep, and other animals. What they offer, however, to the "Light of the Middle Kingdom" is not as valuable as the presents which they receive in return; and they are kept in subjection by constant bribery.

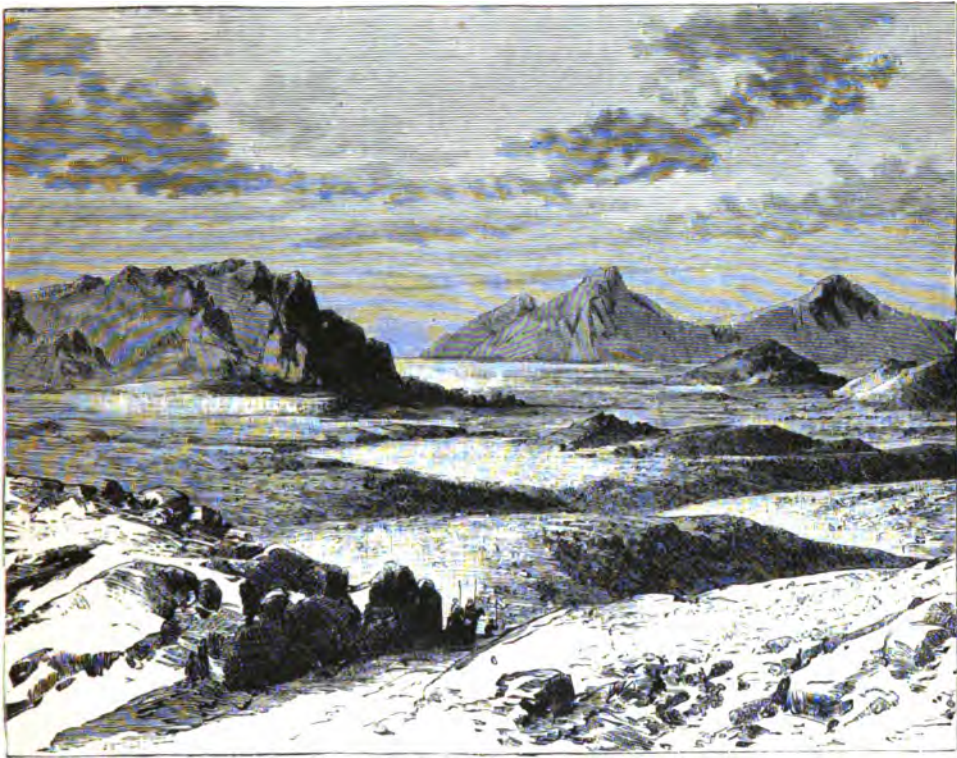
With time, through the influence of Buddhism and the example of Chinese moderation, this race of marauding horsemen, which covered Asia with seas of blood and received in Karakorum ambassadors from the most powerful kings, has given place to a nation of good fathers (though notoriously gluttonous and filthy), and of pacific, even cowardly shepherds. These men are indolent in mind and body, and at the same time they are skilled riders, inured to cold, heat, thirst, hunger, and all sorts of fatigue except that of the march. The Mongols have preserved little from their bloody past, except their military organization, their government by khans or chiefs, and their grouping into 33 *aimaks*, or tribes, which are subdivided into 172 *khochoun*, or banners. Current history mistakenly charges all this past of carnage to the Mongols alone; but more than one race and one tongue were represented in Jenghiz Khan's flying camp; his horde of warriors was recruited from all the large tribes of northern and central Asia. The same was true of Tamerlane's torrential army, and later also of the troops of the "Mongol" conquerors of India—the founders of the opulent empire of Delhi. The great Mongol nation has lost all cohesion. Some of its tribes have submitted to Chinese ascendancy; others, as the Buriats and Kalmuks, have taken rank in Russia's endless cortege. In the remote past, these tented herdsmen formed, perhaps, one and the same people with the men who to-day till the fields along the banks of the Yellow River and of the Yangtze. The Mongol features are Chinese, with slight shades of difference, such, for example, as less oblique eyes. They have high cheek-bones, flat noses, and black hair; their cheeks are smooth, either naturally or as the result of the long practice of depilation. As for the non-monosyllabic Mongol tongue, it has no affinity with Chinese, but belongs to the stock which recent scholars designate as Finno-Tataric or Ural-Altaic; there are three great dialects, corresponding to the three great branches of the nation, namely, the East Mongols, West Mongols, and Buriats.

The Khalkhas, a division of the East Mongols, inhabit the north of Mongolia, that is, the high Altai valleys, in which murmur the head-waters of the Yenisei, and of rivers which go to supply Lake Baikal or to form the river Amur. Here stretch vast tracts of excellent pasturage which the White Czar will some day wrest from his cousin of Peking. The Khalkhas also occupy the basins of various salt lakes, the greatest of which, the Ubsa-nor, embraces about 1200 square miles. Altai Mongolia is more valuable than the other sections of the country; it is far superior to Gobi, which separates the Khalkhas on the north from the Eleuths on the south.

Gobi, a desert of about 460,000 square miles, is called Sha-moh by the Chinese. It forms the eastern terminus of the arid belt which begins on the Atlantic coast, between Morocco and Senegal, and which, traversing the old continent from west-south-west to east-north-east, extends from the Bank of Arguin to the Khingan Mountains of Manchuria (including the Sahara, Arabia, Iran, Turan, Takla-Makan, and Mongolia). Whoever visits the Desert of Gobi under the burning summer sun sees a torrid Sahara with fixed or moving dunes, gravel as sterile as the stones of the hamadas, evaporated lakes, waterless torrent-beds, and yellowish or saline depressions; but the traveller is greeted in winter by polar temperatures; the excessive cold is due less to the latitude than to the dryness and elevation of the plateau (2600 to 5000 feet, the mean altitude being 3950). Herds of *dzeren* antelopes fly like the wind over the ungainly plains; the Mongolian's two-humped camel, his horse, his ox, his cow, and his broad-tailed sheep browse here on a wretched grass. No trees are to be seen; along the entire route across the desert, from Urga to the Great Wall,—a road which

is much travelled, notwithstanding the inclement climate of the plateau, — there are just five trees, in a distance of 500 miles. The winds are strong enough to uproot even low plants like wormwood and mugwort, and these they chase in a mad dance over the hard ground of the steppes.

South of the Desert of Gobi, a few tribes of Eleuths roam in the lofty mountains and deep valleys, and along the borders of the salt lakes, in the province known as Kōkō-nor or Tsing hai; this Mongolian country of 116,000 square miles contains perhaps 150,000 inhabitants. It borders China on the east and Tibet on the south; its mountains are an expansion of the Kuen-lun range. Lake Kōkō (Blue Lake) is



THE DESERT OF GOBI.

250 miles in circumference, and covers an area of 2000 square miles. It has no outlet, although more than one torrent flows into it from the neighboring snow-clad mountains during four months of the year, — that is, during the season that is not absolutely wintry at this altitude of 10,700 feet. The lake is ice-bound 250 days every year. Other banners rove south-west of Kōkō-nor, where the Hwang ho, in its extreme upper course, flows over the high pasture-grounds of Oduntala. Cities are few and small among these mounted herders, these drinkers of mare's-milk; but in and around the towns are enormous convents which are occupied by hundreds or thousands of lamas. It is said that fully a third of the Buddhist Mongolians while away their lives in these consecrated barracks.

The chief city, called by the Mongolians Bogdo-Kuren, or Great Camp, is more

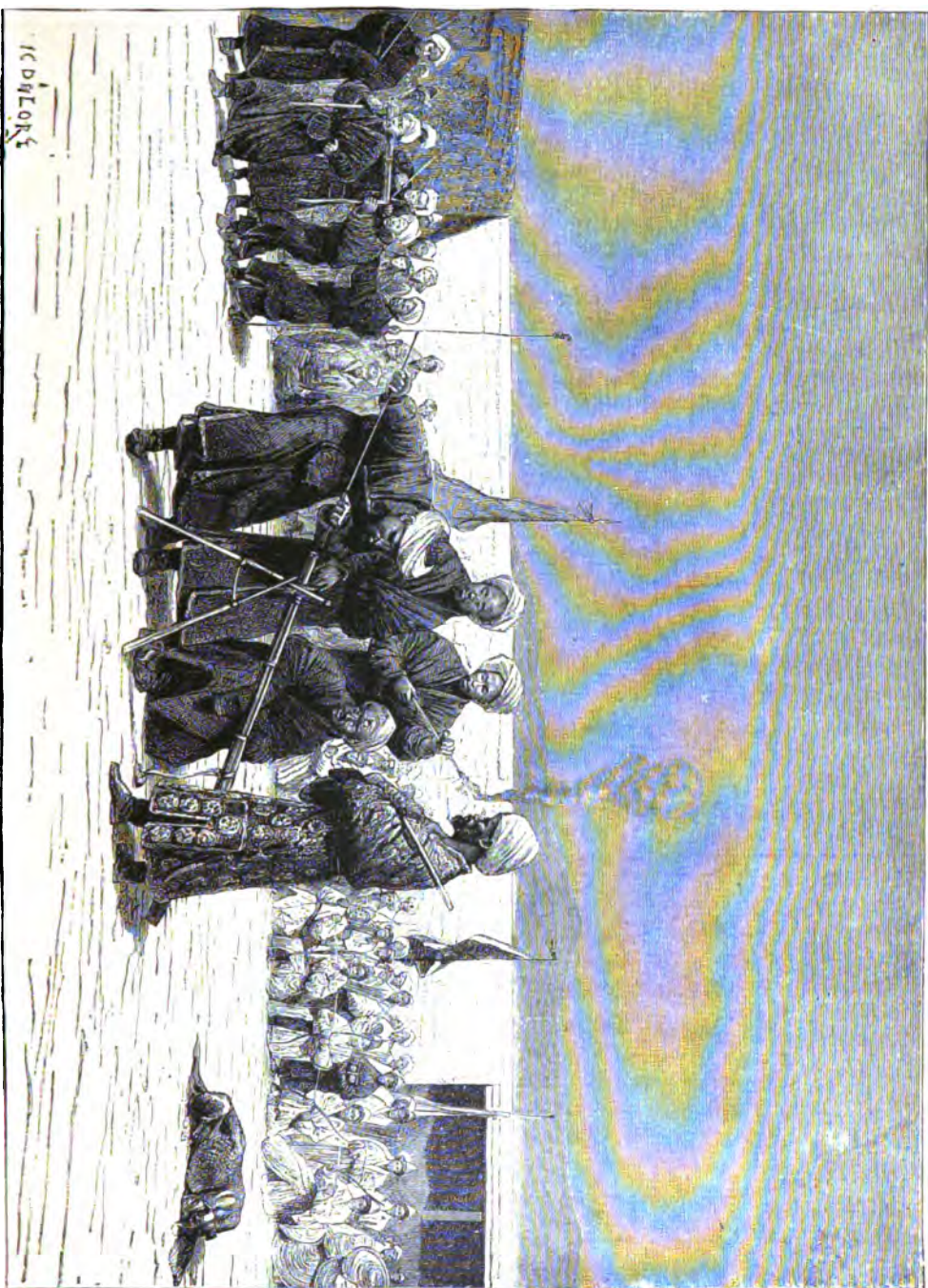
widely known under the name of Urga (pop. 30,000). It is situated in northern Mongolia, in the territory of the Khalkhas, near a river which flows into the Orkhon; the Orkhon empties into the Selenga, and the Selenga flows to Lake Baikal. As Urga lies at an altitude of 4245 feet, its temperature sinks as low as -54° to -58° F. By far the greater part of the Mongols of Urga are lamas, and the city ranks next to H'lassa in degree of sanctity. It is the seat of the Taranakh-lama; this sinless, immortal pope is subordinate to the Tibetan Dalai-lama, the pope of Shamanism, residing at H'lassa. Tibet is the Holy Land of the Mongols, H'lassa their Rome, and Tibetan is their sacred tongue.

Chinese Turkestan. — Gigantic Mountains. — Scant Rivers: The Tarim, Lob-nor. — This country of 425,000 to 435,000 square miles is called Turkestan because its 600,000, 800,000, or 1,000,000 inhabitants speak Turkish, and it is Chinese because it is a dependency of China. In the national tongue it bears the name of Djeti-Shahr, or the Seven Cities; in the language of Peking it is entitled Thian-shan nan lu, the Route south of the Celestial Mountains, to correspond with Thian-shan peh lu, the Route north of the Celestial Mountains (*i.e.*, the Dzungaria country). The climate is cold and excessively dry.

From the gigantic mountains which encircle it everywhere except on the east, — from the Thian-shan¹ on the north, the Karakorum on the south, and from the huge western breastworks formed by the rim of Pamir, torrents descend into this ancient Kashgaria; but for these, the entire country would produce nothing except dry pasturage, and the towns would be replaced by the tents of the nomads and by winter hamlets. In a rainier clime, in a region less frequently swept by whirlwinds, the rivers from the lofty mountains (the Karakash, the Khoten, and the Yarkand, issuing from the Karakorum, the Kashgar from Pamir, the Ak Su and the Taushkhan from the Celestials) would pour down as Rhines or Rhones, and, uniting into one mighty stream, would pierce the rocks to the sea. But neither the Thian-shan, nor the Roof of the World, nor the Karakorum bear frosts worthy of their great altitudes; the currents which they send to the Seven Cities sink into the ground or are lost by evaporation farther down stream. All these rivers united form an exceedingly scant stream, the Tarim (250 or 260 feet broad), which straggles as far as Lob-nor. This lake, which is gradually being displaced by the shifting sands, consists of two lagoons having a depth of 7, 10, rarely of 13 feet, and situated at an elevation of 2201 feet; it is, for the most part, a reedy swamp with rush thickets, and it constitutes the last remnant of a vast Caspian, the very ancient Si hai, or West Sea, of which Chinese history preserves some traditions.

Owing to the scarcity of water and the constancy of the winds, the air is incessantly filled with fine sand; sometimes it appears in funnel-shaped clouds and hurricanes, sometimes it is invisible and impalpable, but it always veils the sun. It is due to this dust in the atmosphere that blindness and ophthalmia are so prevalent in

¹ As M. Reclus has already referred to the disputed question of the geological formation of the Thian-shan range (see page 254), it may not be out of place to notice here the existence of an old crater among the out-mountains of this chain. Lieutenant-Colonel T. E. Gordon, C. S. I., published a work, a few years since, entitled *The Roof of the World*, which contains an account of travels and explorations made in Turkestan. After describing the discovery of an extinct volcano among the Thian-shan summits, he says: "Sir Henry Rawlinson, the President of the Royal Geographical Society of England, in addressing the meeting of the 15th of June, 1874, said, with reference to this, that the discovery of an extinct crater on the outer skirts of the Thian-shan was a most important addition to our knowledge of the physical geography of the region, confirming, as it did, what the great Humboldt always maintained with regard to the Thian-shan, but what the Russian geographers have recently disputed." — Ed.



CHINESE TROOPS DRILLING - KASHGAR.

Turkestan, among nomads as well as among the sedentary inhabitants. The latter are everywhere less robust than the roving population, for, however fruitful their oases may be, fevers often hover around the extravasated waters. The climate of the oases, as well as of the desert, is exceedingly crabbed and variable.

In this vast depression, Turks, Iranians, Chinese, Mongolians, and Tibetans, as well as Hindus and Arabs,—in a word, all the Aryans, Semites, and Mongols of the surrounding countries,—have been fused as in a huge vat. Out of the mixture has sprung a Turkish race, the members of which differ greatly in features but are unilingual. They all speak an excellent Turkish. The Galchas, the only rural population (the inhabitants of the oases are nothing more than suburban kitchen-gardeners), have preserved their old Iranian tongue. The entire nation professes a strict Islamism.

The cities and towns are often buried under the masses of shifting sands. Yarkand, the chief city, contains a population of 60,000, 80,000, or 100,000 souls, according to different calculations; it borders the principal current of the country, the Yarkand Daria, at an elevation of 3921 feet. Kashgar (pop. 50,000) is somewhat higher above the seas (4042 feet). Khoten (pop. 40,000) is at a still loftier elevation, 4492 feet, in the region where the torrents roll jade in their waters, near the sand-pits of Takla-Makan.

Takla-Makan.—There is no more arid district in the world than Takla-Makan, which forms the western terminus of the Desert of Gobi; nowhere are bolder dunes abandoned to the countless caprices of the winds. Certain of these sand mountains reach, it is said, an elevation of 425 feet. Now, the dune of Lescours, the most famous in Landes and in all Europe, is only 292 feet high.

Dzungaria.—When the Mongolian faces the Orient, on his right, to the southward, stretches Tibet, which he has named Baran-Tola, or the Right Side; on his left is Dzungaria, or, in Mongolian, Dzegum-Tola, or the Left Side. The Chinese call this region Thian-shan peh lu, or the Route north of the Celestial Mountains, as they name the Turkestan of the Tarim the Route south of the Celestial Mountains. Both these names are very appropriate; eastern Turkestan affords a route to Europe,—difficult, it is true,—by way of western Turkestan and the Caspian, while Dzungaria offers another and a very easy passage, either by the valley of the Ili or by the plains of the upper Irtysh; at the terminus of the Ili stretches the steppe of the Balkash, and along the Irtysh, which is reached beyond a summit-line of only 2510 feet, lies the steppe of Semipalatinsk.

In the north of Dzungaria, which was formerly a sea or lake, and which is now a rugged steppe, scant streams creep over the clay, and melancholy shrubs struggle desperately against furious winds; not a green meadow, not a grove, not a forest is to be seen; numerous brackish lakes, large and small, glitter in the sunlight, but no river flows out of them. In the south, between mountains towering 16,000, 20,000, or 23,500 feet above the seas, the Ili, a large tributary of Lake Balkash, moves through a superb valley, amid grassy fields, gardens, and orchards, sending off canals and receiving torrents formed by the glaciers.

There were a million Mongol inhabitants in Dzungaria when, in 1757, the Chinese fell upon them and massacred them almost to the last individual. There were two million Chinese, Manchus, and Mongols there when, in 1865, an uprising of the Mohammedans of the country left, it is said, only 139,000 living inhabitants. The Chinese have flowed into the country since, and Dzungaria is slowly peopling

again. It contains now scarcely 600,000 persons on its 148,000 square miles. The capital, Kuldja (pop. 15,000), is situated on the Ili, at an elevation of 2070 feet, in the midst of gardens and poplar groves and near powerful fountains; it is possible



A FALCONER OF CHINESE TURKESTAN.

that these springs cross the mountains through subterranean channels, from Lake Sairam, which lies at an altitude of 4160 feet.

Tibet. — Tibet (652,000 sq. m.) is known to its rulers, the Chinese, under the name of Si Dzang, or the Western Dzang. In the interior or on the frontiers rise the Kuen-lun, the Karakorum, and the Himalaya ranges, the highest chains in the

world. Among the lofty valleys are the valley of the upper Indus and that of the upper Brahmaputra, here called the Dzangbo. Such is the elevation of this country that a salt mine is worked on the plateau of Lashe, between Ladak and Digarshi, at an altitude of 21,654 feet, or nearly twice the height of the Pyrenees. There are other very lofty mines, such as certain gold veins, where the miners protect themselves from the intense cold with the skins of long-haired oxen, the horns of which they do not remove.

The Kuen-lun; Katshe.—The oldest and at the same time the least elevated and the least rent of the three giant ranges which burden Tibet's monstrous back is the northern, or the Kuen-lun, a prolongation of the Hindu Kush, as the latter is a prolongation of the Caucasus. This long chain, composed of syenites and sandstones, runs eastward, and terminates at the centre of China, above the plains of the Hwang ho and the Yangtze'. As it lies so far to the northward and so remote from the warm waters in which the monsoon originates, it possesses fewer snow-masses and fewer glaciers than the other two. In a word, it is the most continental of the three. In Tibet, its altitude reaches 23,950 feet, and, as in the Karakorum range, the passes are loftier than those of the Himalayas; they open in an exceedingly rarefied atmosphere, where man finds it difficult to breathe.

Katshe, as the Tibetan district south of the Kuen-lun is called, is a plateau 14,750 to 15,750 feet above the seas; it offers to the Turkish or Mongol shepherds a few summer meadows around certain lakes and lagoons. Here mountains rise above 23,000 feet, or even reach 24,500; the greatest elevation is attributed to Targot-gap (Father Targot); Dangra-yum (Mother Dangra) is considered sacred: the pilgrim who makes the tour of it three times, reverently saying his prayers in the chapels, is cleansed from his sins; Nindjin-tangla (23,596 or 25,016 feet) towers near Tengri-nor, a lake 50 miles long, with an area of about 1000 square miles, and situated about 15,000 feet above sea-level. Its waters are supposed to flow to the Indo-Chinese Salwin; its sanctity attracts pilgrims, who come in processions to worship Buddha in the cloisters along the banks and in the islands.

The Sutlej, Indus, and Dzangbo.—Katshe contains no Tibetan inhabitants, and has none of the characteristics of the true Tibet except the extreme elevation of its surface. The real Tibet crouches at the southern base of the Karakorum; it embraces three valleys, namely, the upper Sutlej, the upper Indus, and the upper Dzangbo. The Sutlej has its head-waters in the sacred lakes of Manasarowa and Ravan-hrad, which are dominated by Mount Kailasa, 22,000 feet high. Kailasa, in Tibetan Tise, was peopled in the legends of olden times by the gods of Mahadeva's brilliant cortege; it is the Maha Meru of the Indian Pantheon, which is celebrated in so many hymns and invoked in so many prayers. Buddhists and Brahmanists alike also invoke Lake Manasarowa, which they believe to have been created by the divine breath of Brahma. Fortunate is the pilgrim who journeys to its celestial waters; and more fortunate still is the being whose dead body is permitted to float in its waves. This lake is gradually shrinking, for the process of desiccation is going on slowly but surely in Tibet. The snow-line is found at an elevation of 18,300, 18,700, and sometimes 20,000 feet. From the plateau, the Sutlej soon enters the Punjab through frightful gorges. The Indus likewise descends into the same region, but by a longer route, forming the arc of a circle, of which the Sutlej is the chord, and it reaches the excessively dry lowland through gloomy defiles. It is uncertain whether the Dzangbo¹ (signifying in Tibetan the Holy River) receives the waters of

¹ The term Yaru Dzangbo, often encountered in books and on maps, means the Upper Dzangbo.

the Palti, a circular lake 13,498 feet above the sea. It is the Dzangbo that the unprecedented rains of Assam convert into the species of perpetual inundation called the Brahmaputra. When it leaves the uplands to bury itself in gorges and to drop there, from rapid to rapid, into the lower valley, it carries apparently 28,000 cubic feet at low water and about 700,000 in the freshes.

Rainy Tibet, Dry Tibet. — The eastern part of Tibet is wholly dissimilar to the western. The mountains are of stupendous proportions, as in the west, but they are rent by gaps into which the monsoon rains penetrate. Fantastic erosions, prodigious masses of débris, black cañons, torrents whose courses have not been traced, but which certainly flow to the Irrawaddy, the Salwin, and the Mekong, — such is rainy Tibet. The distinguishing characteristic of dry Tibet, inappropriately called the Snowy Kingdom and the Northern Snows, is its continental climate, which is as destitute of rain and consequently of snow as is possible at such high altitudes. The climate is glacial, even in summer; there are few trees and almost no shrubs, and nearly the only cheerful flame to be seen is that produced by the slow-burning yak-dung. The inhabitants, no matter how they are clad, suffer terribly from the cold winds; nature has wisely covered the animals with an abundance of fine hair or wool, — goats as well as sheep, the powerfully built dogs as well as the yak or Tibetan ox, the buffalo, the antelope, the ass, the hemion, and the monkeys, lynxes, white wolves, white bears, and panthers. Sheep are used in Tibet as beasts of burden; they are the only animals capable of climbing to the height of some of the cols; they carry weights of 10 to 25 or 30 pounds through passes 20,000 or even 21,000 feet above sea-level.

The Tibetans. — Dalaism. — The Tibetans call both their country and themselves Bod; their number is variously estimated from $1\frac{1}{2}$ to 10 million. The latter figures are certainly much too high, but $1\frac{1}{2}$ million is perhaps too low an estimate, although nearly the entire nation lives along the Dzangbo. The Tibetans are of small stature, with powerful shoulders, broad chests, and swarthy complexion; their features lack nobility, because of race origin, and from the effect of the cold winds, which would blight any cast of countenance. But they are a kindly, upright, energetic, and faithful people. Converted to Buddhism between the fifth and seventh centuries, they received, along with the doctrine of Sakya-muni, all the science and civilization that the missionaries of the new faith brought with them to these desolate plateaus. They remained the most fervent disciples of Buddha; and it was through them that the Buddhist teachings made the conquest of upper Asia. But these doctrines were not preserved in their original purity, and Tibet became the sanctuary of a religion which was founded on Buddhism, but which took on a new form, and became known under the name of Dalaism, or Lamaism.

Tibetan, the most agglutinative of the monosyllabic idioms, has pushed beyond the frontiers of the people which witnessed its birth. Its diffusion outside of Tibet, eastern Cashmere, a part of Sz'chuen, etc., is due solely to the progress of Lamaism in central Asia and in the northern plains. It is understood in Mongolia, in Manchuria, in Siberia, and even among the Kalmuks of the Volga, by the swarms of priests and monks who infest the countries where Dalai Buddhism prevails.

Not including chapels, there are in Tibet three thousand temples and monasteries, the sanctuaries and abodes of a hundred thousand lamas, who constitute the aristocracy of the country. Certain of these priests, the Yellow Caps, are celibates; marriage is permitted among the Red Caps. Throughout all their nine sects is heard the

unwearying repetition of the mystic formula: OM MANI PADME HUM! This prayer is breathed by more lips than any other in the world; but neither the priests, nor the throngs of monks and nuns, nor the most subtle doctors, nor the mass of laymen, understand this "cry of the soul." What meaning underlies these few old Sanskrit words, which are translated into common speech by the enigmatic expression: God! The Jewel in the Lotus! Amen?

H'lassa, the capital of Tibet, counts 20,000 priests among its 50,000 inhabitants. It is situated at an altitude of 11,700 feet, in the valley of one of the left affluents of the Dzungbo. On the Putala, the rock overlooking the city, in an enormous structure, at once palace, fortress, and convent, dwells the incarnation of Buddha, known as the Dalai-lama, — the Priest of the Ocean, the Sea of Wisdom, and the chief of the Yellow Caps. Another incarnation of Buddha, a very great prelate, though less powerful territorially and pecuniarily than the Dalai-lama, is the Bogdo-lama, or the Teshu-lama, "the most excellent of the Jewels of the Understanding," the head of the Red Caps, or married priests. With 4000 officiating priests, he occupies the *lamasary* or monastery of Teshu-Lumbo (or Exalted Glory), a few miles from Shigatsé, a city situated 11,880 feet above the sea. The third person in the Tibetan patriarchate is the Taranakh-lama of Urga. The Buddhist monasteries often enclose 2000, 4000, 5000, and even 8000 priests or monks, it is said. The *Om mani padme hum!* opens wide the gates of happiness to them.

J A P A N.

The Archipelago of the Sun's Origin. — The Japanese call their delightful country Nippon, from the Chinese syllables *Zip pan*, signifying literally the "Sun's origin," i. e., the land over which the sun first rises. Yamato, meaning "at the foot of the mountains," was the ancient appellation of Japan, and it is still its poetic name.

The Japanese archipelago is composed of about 4000 islands, lying east of Siberia, Manchuria, Korea, and northern China. All but five of them are small, and one of these five, Saghalin, the most northern, has been absorbed into the Russian Empire; in exchange for its 24,500 square miles, which are, however, cold, foggy, and empty, the Japanese received the Kurile Islands,¹ or less than 6000 square miles, with less than 500 inhabitants. Japan now embraces 148,456 square miles, with a population of 40,072,020.

Hondo: Mountains and Volcanoes; Fuji-san. — More than half, almost three-fifths, of the empire is comprised in Hondo (86,772 sq. m.). This island is most appropriately named, for the word signifies "principal land." The terms Tsiendo and Naitsi, meaning "central land," are less commonly employed; but they are, nevertheless, very suitable titles, since the central point of the island is nearly equidistant from the most northern of the Kuriles and the most southern of the Riukiu group, near the tropic of Cancer. Hondo is known on our maps as Nippon, Niphon, or Nihon, a name which correctly applies to the entire archipelago. It is cut on the north by the 41st parallel and on the south by the 34th.

¹ The 1875 treaty gave Japan *all* the Kuriles, but the Southern have always been Japanese. — Ed.

The loftiest mountains of Japan are in Hondo. Some of them have a sufficient altitude for the formation of snow-masses and small glaciers;¹ yet but for the extreme wetness of the climate there would be no persistent snows, as nearly all the summits are below 10,000 feet. There are several active volcanoes on the island; these rise from a socle of granites, gneisses, mica-schists, and schists. The culminating peak, the majestic Fuji-san, is visible from no less than thirteen provinces. It has been quiescent since 1707; but between 789 and 1707 it suffered six disastrous eruptions; this mountain has contributed its share of ashes to the raising of the Hondo



FUJI-SAN.

plains. Fuji-san rises gently and gracefully, not far from the southern sea, from a pedestal about 90 miles in circumference; its altitude, 12,287 feet,² surpasses that of the Pyrenees by more than 1000 feet, but is considerably below that of the Alps. Owing to its conical shape, it supports no glaciers nor snow-masses; the snows last only ten months in the year. The Japanese regard the mountain as sacred, and it appears everywhere in their romances, songs, poems, pictures, and sketches, and in all the fantasies of their charming art. Thousands of pilgrims visit it to pray in the temples, and many make the ascent to the summit at the beginning of summer. The crater has a depth of 650 feet and a circumference of 8200. Legend connects the largest of the Japanese lakes with Fuji-san; it is related that at the very instant

¹ At least, on Tateyama, in the Hida range.

• ² Or 12,366.

when the mountain sprang into the air the outlines of Lake Biwa's graceful bays appeared far away to the west of the volcano, near the northern sea. It was on the shores of the Biwa, and on the *gawa*¹ issuing from it, called the Yodogawa, that the Japanese race had its birth and development; it was here that the language formed and ripened, and here that art had its awakening. Biwa has about the same area as the Lake of Geneva; but its depth, 279 feet, is only a fourth that of the European lake. It dominates the sea at an elevation of more than 300 feet.

There are other Japanese mountains, much lower than Fuji-san, which have more extensive persistent snows, or eject lava more frequently and more abundantly. Among the active volcanoes, Asama-yama² (8284 feet) is regarded with abhorrence. A hundred years ago its eruption caused the destruction of 48 towns and villages. Hida and Nikko are famous for their snow-capped mountains. In Hida (10,000 feet), the whitest of all the Japanese masses supplies water to numerous impetuous rivers, and it has changed many a volcanic cup into a transparent azure lake; on the summits of wooded and lacustrine Nikko the year is one long winter. Fuji-san, Asama-yama, the Hida and Nikko chains, all rise in the centre of Hondo.

The Seto-utsi. — **Sikok, Kiusiu.** — A shallow strait, called the Misima-nada on the south-west and the Harima-nada on the north-east, separates Hondo from Sikok; another, the Suwo-nada, passes between Hondo and Kiusiu; still another between Kiusiu and Sikok; and, lastly, the Iwo-nada washes at the same time the shores of Kiusiu, Sikok, and Hondo. All these straits constitute the Seto-utsi, or Inland Sea, — a broad, luminous, marvellous fiord, with three inlets. Sky, earth, ocean, mountains, the infinitely varied forests, — everything in nature appears here in all its seductiveness, at once graceful and grand. If the magic waves should sink 150 feet, or 200 at the most, the three islands would be united into one.

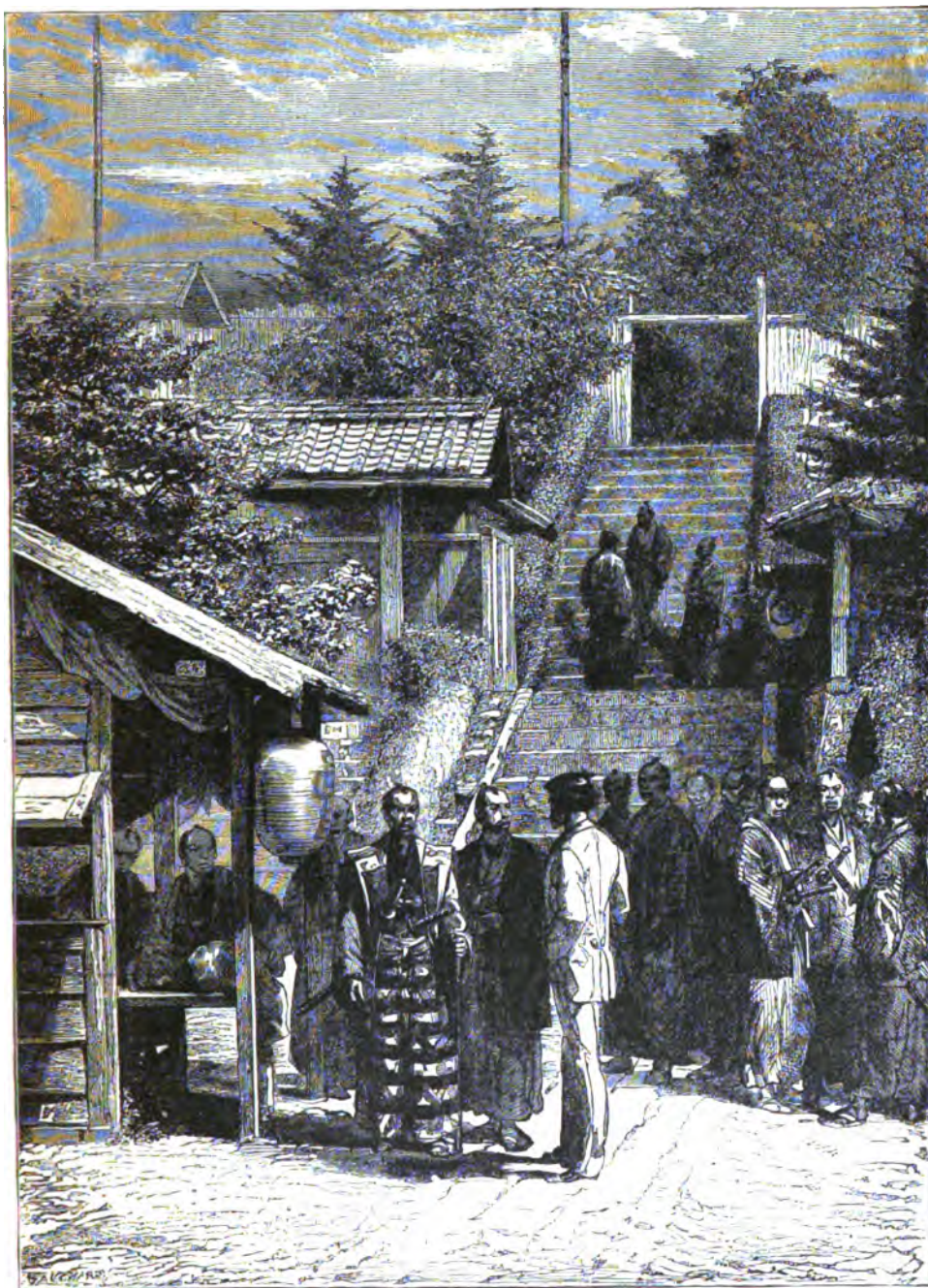
Sikok, or the Four Provinces, has a population of 2,863,000, on about 7000 square miles. Volcanoes, none of them over 5000 feet high, rise on a schistose foundation; some of these are very destructive, especially the Tsunoyama, which is still active. Forty thousand persons perished by a single eruption of this volcano.

Kiusiu, or the Nine Provinces, consists of schistose rocks. It has an area of 16,800 square miles and a population of 6,166,000. Volcanoes have been frequently active here; toward the end of the last century 53,000 inhabitants were destroyed by a convulsion of Miyiyama; and its neighbor, Uzen-san, is still smoking. In 1638, the Christians, who revolted against the laws and faith of the empire, were cast by thousands into the jaws of this last-named monster; Asosan is not yet extinct. The culminating point of Kiusiu is 5486 feet above the oceans.

Yezo. — The orange and banana flourish in Kiusiu and Sikok; in the south, and even in the centre of Hondo, where the mild, moist climate evokes a brilliant vegetation, tea, cotton, and rice grow exuberantly, and the *hara* (mountain meadow) on the mountain flanks is a delightful orchard. But toward the north of the large island nature becomes severe; beyond the Tsugaru Strait, in Yezo, or the "land of the savages," it is harsh and frowning. Yezo was long neglected by the Japanese as a cold, sullen region, almost uninhabitable for the fortunate men on whom the sun of the Seto-utsi smiled. They are colonizing it at present; but there are still not over 271,000 inhabitants here, with the Kurile islanders. Yezo is about equal in extent

¹ *Gawa*, or *kawa*, is the term applied in Japan to a river, stream, or torrent, and to water-courses in general.

² *Yama* in Japanese signifies mountain.



GUARDS OF THE SWISS LEGATION—YEDO.

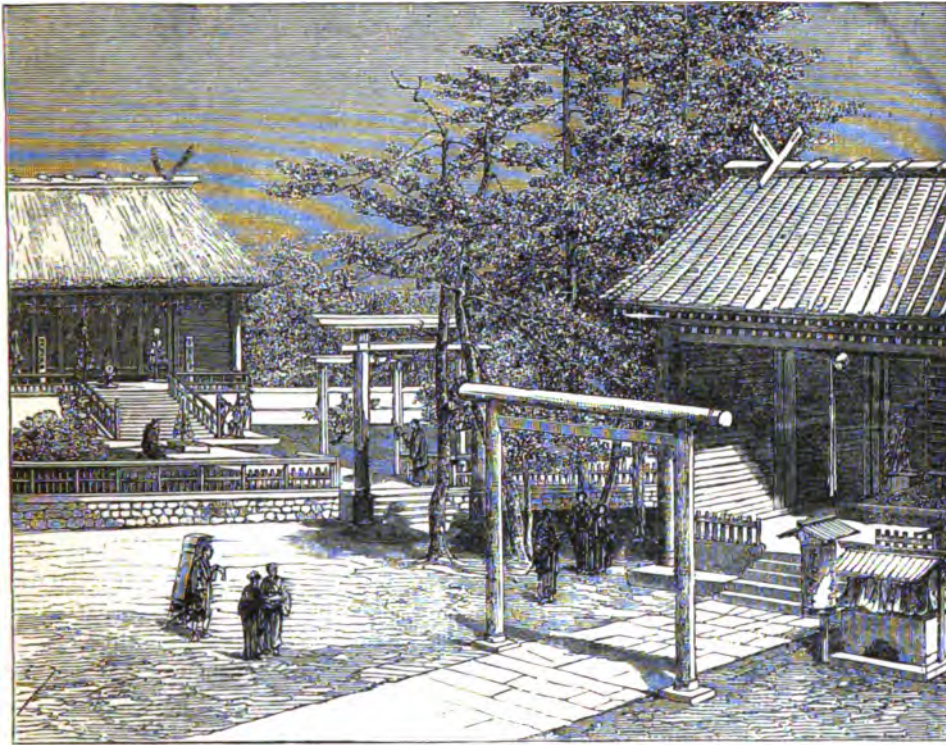
to Scotland, which it resembles in climate, in its aciculars, its fish-stocked sea, and its rivers running between basaltic banks and abounding in salmon. Yezo contains the principal stream of Japan in the Ishikari; the latter flows in a narrow, rocky bed, and has seventy-three rapids. Yezo has volcanoes, like all the Japanese islands. It attains a much higher elevation than Sikok or Kiusiu, but is lower than Hondo; the Devil's Solfatara (Itasibé oni) rises to a height of 8507 feet. The island has been likened to a huge elephant's head, with the trunk stretching southward. It is covered with opulent forests, of divers species, among which the rigid, gloomy, austere pines, firs, larches, and other sombre trees of the north, predominate. Immense treasures of coal are hidden in the bowels of the mountains, — 400 billion tons, it is estimated, or enough to illuminate and heat the world for fifty generations. Yezo itself finds use for its coal; for the climate is cold, notwithstanding the exuberant vegetation, and although the sky in the south is that of Vesuvius and in the north that of Venice.

The Kuriles. — The Empire of Japan has recently annexed an archipelago north of Yezo, named the Kuriles, and a splash of luminous islands south of Kiusiu, called the Riukiu Islands. Though the Kuriles are numerous, there are not a thousand of them, as their Japanese name, Tsi-sima (Thousand Islands), would indicate. They extend in an admirably regular curve for 400 miles, from a point opposite Yezo almost to the southern extremity of Kamchatka (from which they are separated by a shallow strait); the concave portion of the arc faces the Sea of Okhotsk, which is less than 2600 feet deep, while the convex fronts the Pacific in the vicinity of its lowest depressions. The Kuriles are said to contain more volcanoes than the principal islands of Japan proper; their number is placed at 52 — of which 9 or even 13 are still active; there are only 49 in the large Japanese islands (of which 17 are active): namely, 32 in Hondo, 11 in Yezo, and 6 in Kiusiu and Sikok. The Kurile cones are sharper in outline and less worn than the Japanese; few of them have been measured. Of the 5740 square miles of territory embraced in the Kurile chain, Iturup, not far from Yezo, occupies 2658, or nearly a half; the islands are almost uninhabited, notwithstanding the abundance of fish in the seas, and although tillage is not to be despaired of in the major part of them.

The Riukiu Group. — There was a long dispute between the Chinese and the Japanese for the possession of the Riukiu Islands. The claims of the Japanese, whose language is spoken in the archipelago, were recognized in 1874, and the islands have since been treated as an integral part of the empire. The Chinese call the group the Lew-chews, as they are unable to articulate the letter *r*. Like the Kuriles, the Riukius lie in the form of an arc of a circle, with the convexity toward the east; but the two archipelagoes are totally unlike in climate, aspect, and geological formation; the oak does not reach maturity in the Kuriles, while palms grow luxuriantly in the Lew-chews; the Kuriles bristle with mountains, the Lew-chews have no elevations above 1600 feet; the Kuriles are volcanic, the Lew-chews are not; the Kuriles are uncultivated and almost uninhabited, the Lew-chews are a rich garden supporting 400,000 inhabitants. All together, the Riukius embrace 1865 square miles; they stretch from near Kiusiu to Formosa. They are surrounded by a belt of corals, from which the name of the islands, signifying, probably, "the land of the transparent coral," is derived.

The Japanese. — Their Origin and Language. — It rains copiously on the brilliant empire of Japan; 64.6 inches of water fall annually on the island of Hondo, at Tokio, the capital, 69 at Yokohama, the port of Tokio, 52 at Hakodaté, in Yezo, and 48 at

Nagasaki, in Kiusiu. Again, not only its insularity but the influence of the Kuro Shiwo (the Gulf-stream of these waters) produces a much milder climate than the neighboring continental lands of Manchuria, Korea, and northern China possess, although the temperature is much lower than in the same latitudes and at equal altitudes in western Europe. Japan, nevertheless, matures more fruits and cereals, and in greater varieties, than corresponding European countries. There is no country in the world, not even within the tropics, where so many different species of superb trees are to be found on such a restricted area. There are so many rich plains and fruitful valleys in the principal islands, so much water descends from the mountains for the



A SHINTO TEMPLE.

irrigation of the rice-fields, so many forests have been converted into grass-lands without destroying the mountains or ruining the climate, the seas are so abundantly stocked with fish, and, lastly, the Japanese live so frugally, that Japan supports 267 persons to the square mile, and, excluding the "colonial lands" of Yezo and the Kuriles, there are more than 350 men to every 640 acres. Yet the country is so rugged that there are scarcely 20,000 square miles of really cultivable soil.¹

According to the Japanese themselves, they are descended from natives of the Kurile Islands crossed with an autochthonous tribe, which was related to the aborigines of Formosa. They are clearly a mixed race, for they present an infinite variety of types, from olive-yellow to white, from narrow and oblique eyes to wide open

¹ Without Yezo, the Kuriles, and the Riukius; that is, in ancient Japan.

straight-set eyes, from protruding high cheek-bones to sunken cheek-bones, from flat noses with big nostrils to noses of the noblest mould. Among scientists who have studied the Japanese types in all parts of the empire, some connect them with the Chinese and with the "Mongols" in general, and others with the Malays; others still assign them to the White race. They are, for the most part, ugly-featured and of low stature. The women are very slender and graceful. The Japanese live in peace and contentment; they are kindly, free from malice, and marvellously patient, as well as clever, sagacious, practical, industrious, and eminently artistic; they are said to have outstripped the Chinese, from whom they received their first lessons, and whose language they have allowed to degrade their own agglutinative and mellifluous tongue. Japanese has not preserved its original force and elegance anywhere except at the imperial court and in the salons of select society; among the masses of the people it has been corrupted with monosyllables ill suited to the genius of the old idiom. In writing, the Chinese hieroglyphs are used in connection with the Japanese characters, which are syllabic. Notwithstanding appearances, the influence of China on Japan is superficial, and the Japanese have preserved their vitality and their originality in spite of the regard which they evince for the language and literature of their neighbors. Of late, they have transferred their admiration and worship to European arts, sciences, and languages; but even this fetichism is losing favor. The nation which could convert its archipelago into a garden where volcanoes were still smoking can retain its individuality without having recourse to the terrible laws which only recently armed the country against foreigners. It is not many years since the Japanese government, jealous of its independence, absorbed in home affairs, and fortified by the maxim that the stranger is always an enemy, protected the empire doubly against outsiders, first by beheading every non-Japanese who landed on Nippon soil, and secondly by forbidding every subject to leave the empire without express permission, under pain of heavy punishments.

Buddhism, which was early introduced into Japan by Chinese apostles, did not drive out "the worship of the ancestors, and of the eight million spirits"; this latter religion, now known as Shintoism, was rather engrafted upon the former; the two faiths united their gods, saints, rites, and legends, and the same pagoda often serves for both confessions. There are 190,000 Shinto temples, and 72,000 Buddhist.

The Japanese were living wholly secluded from the rest of the world when suddenly, in 1868, they entered upon a new era by renouncing the worship of their past, their isolation, and their blind imitation of the Chinese. At the same time that they opened their ports to Europe they changed rulers. Previous to this date the supreme power was nominally vested in the *mikado* or *dairi*, a prince residing at Miako. This monarch, who was protected in turn by each of the great vassals, was assisted in the executive power by a lord called the *taikun* or *shogun*, and residing at Yedo. From the latter part of the sixteenth century down to 1868 the mikado was nothing more than a "do-naught" ruler, the taikun having made himself suzerain of the eighteen *daimios*¹ or feudal vassals, each of whom had complete jurisdiction in his own fief. With 344 petty nobles, these 18 great nobles constituted a powerful feudal aristocracy; but the system has been shattered, and the mikado's rule has been restored.

Cities.—Japan possesses several cities with over 100,000 inhabitants.

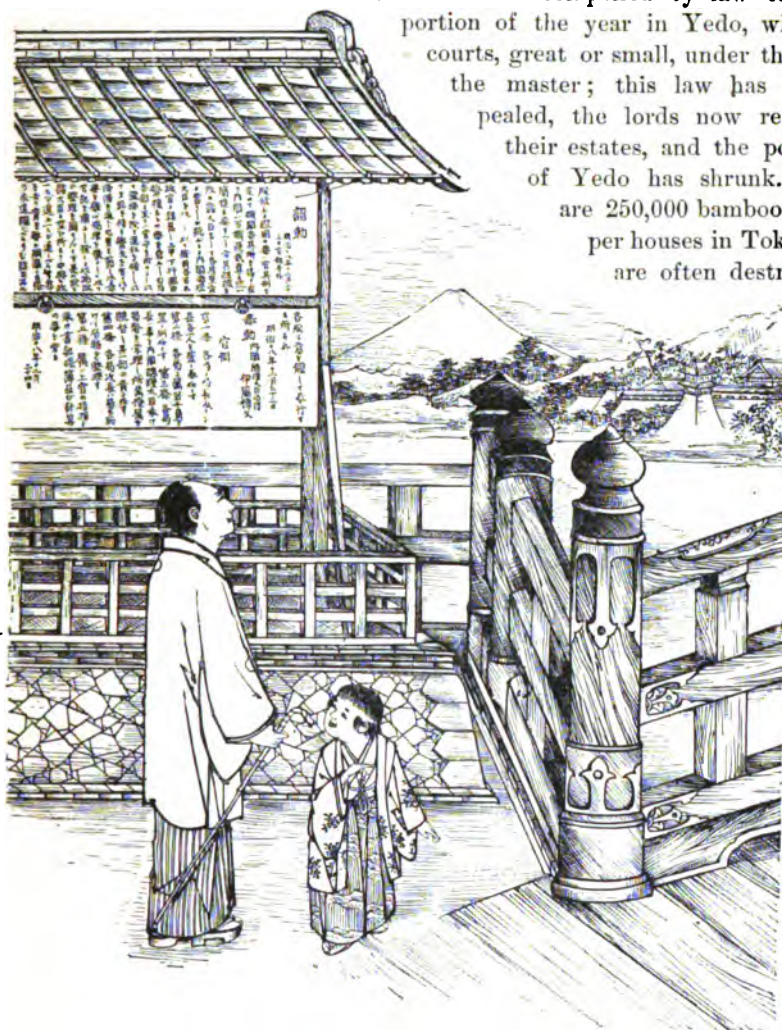
Yedo,² in Hondo, on the shores of a deep-set bay, was formerly the taikun's capital,

¹ Literally, "great names."

² Literally, "port of the bay."

while the mikado resided at Minko; but since the mikado's restoration to power he has transferred his court to Yedo, which has assumed the name of Tokio, or "eastern capital." This city is at present, then, the sole metropolis of Japan; it has, however, lost considerably in its population. Before the downfall of the shogun's power, the inhabitants numbered 1,500,000, against 1,313,000 to-day. Under the shoguns, the daimios were compelled by law to pass a

portion of the year in Yedo, with their courts, great or small, under the eye of the master; this law has been repealed, the lords now remain on their estates, and the population of Yedo has shrunk. There are 250,000 bamboo and paper houses in Tokio; these are often destroyed by



JAPANESE STREET BOARD FOR GOVERNMENT EDICTS. ¹

conflagration. An entire quarter will disappear in an hour, but the inhabitants dread the ravages of fire less than they do the destruction wrought by heavy stone edifices during the earthquakes which are the bane of Japan. One hundred thousand men sometimes perish, it is said, during a single earthquake.

Kioto, or Miako, is also in Hondo. It is situated a few miles west of Biwa Lake. This once magnificent city is still famous for the urbanity of its inhabitants; it is an

¹ From "A Muramasa Blade," by Louis Wertheimber. Illustrated by Japanese artists.

art centre and the seat of classical learning; a purer Japanese is spoken here than in any other city of the empire. It was founded more than eight hundred years before Yedo, which dates from about 1600; but the population does not now exceed 276,000. It is built in a charming and healthful region.

Ôzaka (443,000), 30 miles from Kioto, lies along canals of the Yodogawa delta, very near a gulf of the Inland Sea. It is the Japanese Venice, the monumental city of the Land of the Sun's Origin, a very busy port, and a manufacturing city.

Nagoya (155,000) is a manufacturing and commercial city near a bay on the deeply indented coast stretching from the waters of Tokio to those of Ôzaka.

Kanazawa (197,000) is situated at the base of the mountains, 5 miles from the Japan Sea, facing the distant peninsula of Korea.

Yokohama (120,000), about 20 miles south of Yedo, on the same bay with the latter, contains more Europeans than any other city in Japan, and is the chief emporium for European and American commerce with Japan.

Kiusiu possesses no city of 100,000 souls, or even of 50,000. Nagasaki contains a population of 44,000; this charming town, otherwise called Cape Long, serves as a sanatorium for European and American merchants who are unable to endure the heavy heat of the Shanghai climate; it was long the only spot in Japan where the Dutch, the sole Europeans allowed to enter the archipelago, could settle (on the artificial island of Deshima).

Sikok has no populous centres; still less has Yezo. The capital of the latter island, Sapporo (pop. 8000), is growing slowly, in the valley of the Ishikari, not far from the sea. It cannot vie with Hakodaté (pop. 53,000), a crescent-shaped port on a splendid roadstead.

The Ainos.—This people, of enigmatic origin, is to-day reduced to about 20,000 souls, more or less (probably less). There is some Aino blood in the veins of the Japanese; but the Aino tongue has no affinity with the Japanese. Ainos are to be found among the Russians in the south of Saghalin, and among the Japanese in the north and to a certain extent in the south of Yezo; there are besides a few families of Ainos who engage in the fisheries of the Kurile Islands. They have disappeared from the north of Hondo, where they still existed three or four hundred years ago. There were, doubtless, some also on the neighboring continent; but the Manchus gradually crowded them out in the regions of the lower Amur, and the Japanese drove them from the islands.

The Ainos have long, bushy beards and heavy, shaggy hair; it is even said that their entire bodies are covered with a sort of fleece. Their heads are well formed, their faces less flat than their Mongol neighbors', and their frank, somewhat sad countenances, lighted up by beautiful, straight-set black eyes, are even attractive. They are strong-limbed and small or middle-sized; they hunt the bear, the wolf, the stag, and the smaller animals, and engage in fishing, but they never till the soil, not even in the south of Yezo, where the land is cultivable. Though they kill the bear, they at the same time fear and reverence him as a great spirit. The Ainos believe themselves to be descendants of a god and a goddess. Ethnologists are uncertain as to the race to which they should be assigned.



TUARICKS.

AFRICA.

Name. — Situation. — Extent. — The origin of the name Africa is uncertain; it is, perhaps, a corruption of Auraghen, or Avrighen, the name of an insignificant tribe of the Tuarick nation, a division of the great Berber race. The Auraghen formerly inhabited the shores of the Gulf of Sidra; the name Africa was first given to this seaboard, then it was extended to the surrounding country, and afterward to the entire shore from the Gulf of Sidra to the Pillars of Hercules, and finally to the whole continent.

Africa is joined to Asia by a tongue of land 70 to 75 miles broad, stretching from the alluvia of the lower Nile to the Arabian coast, and called the Isthmus of Suez. The two continents may not always have been united. Evidences of a primordial antiquity are wanting in the Suez Isthmus; it is not a very old rock, but a strip of sand, of fluvial or marine alluvia. Africa was once an island, then, unless it was attached to Europe by the Iberian, Italian, or Grecian peninsula, or, perhaps, to Syria. If any one of these connections ever existed, or if Africa was ever separated from Asia, man had lost all memory of either fact when Greece heard for the first time of the country.

Africa plunges on the north into the Mediterranean, opposite the warmest and most favored shores of Europe; on the north-east, it faces the bald mountains of Arabia, across the Red Sea; on the east, it borders the Indian Ocean, out of which rises its great island of Madagascar; and, lastly, on the west, from the Cape of Good Hope to the Strait of Gibraltar, it looks out over the Atlantic—that ocean which for 350 years was furrowed by slavers, transporting the Africans to the American shores. These traffickers in human flesh have turned aside the torrent of history by the creation of new peoples out of alliances between Blacks, Whites, and Reds. While the sons of Japhet were dragging the race of Ham beyond the seas, Shemite buccaneers set sail from the African gulfs, and, crossing the Mediterranean, landed as plunderers on the coasts of Sicily, Sardinia, Italy, the Balearic Islands, and Spain; then, leaving behind them a train of flaming cities, they turned the prows of their boats southward, carrying with them the sons and daughters of Japhet,—the latter for the harem, the former for the galleys.

From Cape Bon, from which Sicily is visible in clear weather, or from Cape Blanco, whence Sardinia can be seen, to the Cape of Good Hope, Africa is more than 5000 miles long; from Cape Verde, on the Atlantic, to Cape Guardafui, on the Indian Ocean, the breadth is 4850 miles. The coast-line, of 17,700 miles, is 2112 miles less than that of Europe,¹ and yet Europe is only a third as large as Africa; the latter has an area of about 12,100,000 square miles,² fully a thirtieth of which is still unexplored. The population is, perhaps, between 163 and 165 million.

Structure. — Altitude. — The organization of Africa is massive and coarse; islands, slender peninsulas, and deep coast indentations are wanting, as well as large and easily navigable streams. It is traversed in its broadest portion, from the Atlantic to the Red Sea, by the greatest desert in the world; it is encamped on the equator, which crosses it nearly midway between Algiers, in the extreme north, and Cape Town, in the extreme south. This desert, and the tropical situation, would make Africa the torrid continent *par excellence* were it not for the superb central plateau, the most extensive on the globe after the Asiatic. The mean altitude of Africa is variously estimated at 1900 to 2160 feet. This is the loftiest of the continents.

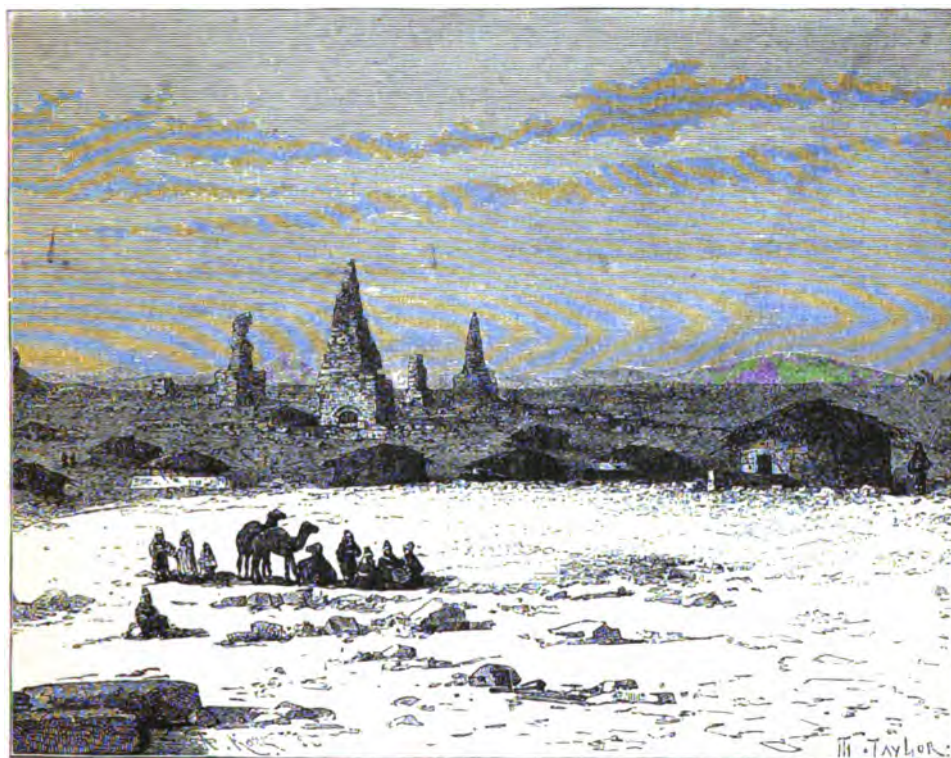
The Barbary Plateau. — Barbary, stretching between the blue Mediterranean and the blazing Sahara, along the shoulders of the Atlas range, is an elevated plateau; it is separated from the smaller plateau of Barca by the sandy waves which the Desert pushes out toward the waves of the Mediterranean. Barbary was an island at the period when the Sahara was a sea;³ it is an island still in its isolation from the other habitable portions of the African continent. The name Barbary is derived from the Berbers, or Kabyles, a race known to have inhabited this region from the earliest times, and which, driven back by the Arabs in the eleventh century, still inhabits the uplands. The Berbers are widely diffused over North Africa; they number only a few millions, it is true, but this fact is due to the desert character of their soil, which, with the exception of the Tell, the oases, and a strip along Soudan, is composed of sands and rocks and is almost never visited by the rains. But for the Sahara this race might have become one of the great families of the earth. For the last fifty-seven years French, Spaniards, and Italians have been intermarrying with

¹ Europe would have vastly more than 19,812 miles of coast if account were taken of an infinitude of fjords, friths, and rias.

² Or, more correctly, though these figures are not exact, 12,136,000 square miles. See p. 8.

³ According to many geologists, the Sahara is not an old sea-bottom.

the Berbers and Arabs of North Africa. The new race resulting from these alliances is growing vigorously in Algeria and Tunis, and it seems destined to rule in the future over all northern Africa, south as well as north of the Atlas Mountains. This chain is the one celebrated by the poets as bearing the crystal vault of heaven on its old shoulders. It has fallen from its mythological heights; the enormous pile of *massifs*, *sierras*, and plateaus is really a prolongation of Mediterranean Europe in climate, vegetation, inhabitants, and all its luminous and dry nature. From the last crest on the south we pass from the Tell into the Sahara. However, during the rainless season (the longest of the two seasons into which the year is divided in the



TUARICK VILLAGE IN THE ALGERIAN DESERT.

Atlas region) the torridity of the desert extends to the very coast of the magic sea. The mountains do not tower high enough into the African azure to protect Barbary from the fiery southern winds. The burning Sirocco and clouds of devastating locusts reach Tunis, Algeria, and even Morocco, from the Saharan oven.

The Great Desert.—South of the plateaus of Barbary and Barca, the Sahara stretches from the Atlantic to the Red Sea and from the Atlas Mountains to Soudan; this vast desert is estimated to have an area nearly equal to that of the United States, including Alaska. At rare intervals, an oasis, with a fountain and palm-trees, invites the traveller to rest from his rough pilgrimage across *hammada*, *sebkha*, and *areg*.—The *hammada* is a stony, burning region, without a spear of grass or a bush, the *sebkha* is a shallow hollow incrustated with salt, and the *areg* is a belt of shifting

times. — The Arabs seldom cross the desert except in bands, and led by a trained and sagacious guide. This guide must possess both knowledge and prescience; he must be familiar with the course and waning of the stars, the path of the sun, the mountain-peaks, the limes, the depressions where a little moisture transudes, and each solitary tree or shrub; he must be able to interpret the footprints on the sand, and to scent the prowling robber, in order to shun him or surprise him, and in order that a heap of heaped bones may not one day reveal the fate of his caravan.

Such a region is doomed, except in the oases and in a few ravines of the loftiest mountains (6500 to 9200 feet, perhaps). In the west and centre dwell Berbers and Arabs, pure, or crossed with each other, or tinted with negro blood, and Tuaricks, likewise Berbers, roam from well to well on their *niehutris*, or race camels; on the east are black tribes, into which some Berber blood has entered; on the northern margin a few French families are gradually becoming acclimated.

Egypt. — Soudan. — Egypt lies east of the Sahara; in the west and in the east stretch waste mountain tracts, and beyond the Red Sea the arid immensity is prolonged nearly across the continent of Asia. But between the two deserts Egypt is traversed by the Nile, which by its inundations and deposits annually restores this famous valley. It is from Soudan that the stream brings its beneficent alluvia.

The Sahara and Soudan border each other along an undulating line more than 3000 miles in length, extending from Saint Louis, on the Senegal, to the Red Sea, and separating the zone of tropical rains from the rainless zone. Black nations, nations bronzed by ancient alliances with the Berbers and by modern, even contemporary, alliances with the Arabs, are crowded into Soudan. They present the most diverse types as regards stature, features, beard and hair, and shade of complexion; they include races of athletic proportions as well as dwarfed tribes.

One large stream, the Niger, a few smaller streams, of which the Senegal is the chief, certain rivers emptying into the White Nile, and, lastly, the Chad depression, which is sometimes a lake, sometimes a lagoon, receive the waters of Soudan. Around this lake, on the streams, and in Soudan proper, two religions and two humanities are struggling for the supremacy. Arabs and pure or Arabicized Berbers are to be met here (though diminishing in number in measure as the Desert is left behind) with wholly black men, and with such bronzed tribes as the Fulahs. The Berbers, Arabs, Fulahs, and a few other peoples are fervent Mohammedans, actively engaged in the work of propagandism among the pagan Negroes around them. A new element has recently appeared here. The French, who were threatening Soudan from the Sahara, have entered it by way of the Senegal.

The Great Plateau. — The Great Plateau begins in the upper Nile regions and in unexplored tracts south of Lake Chad and the Niger; it stretches southward, between the Atlantic and the Indian Ocean, continually narrowing, and terminates in a blunt point very near the southern coast. Possibly some sections of this table-land are among the most favored portions of the globe; but before it had been at all explored it was supposed to be a sterile expanse of sand. It contains vast lakes and broad rivers, which, owing to the copiousness of the rainfall at all seasons, are like permanent inundations. The cradle of the Nile, the Victoria Nyanza, is almost as vast as Lake Superior; Tanganyika, which empties its waters intermittently into the Congo, is a deep lake, not less than 328 miles long; Nyassa, nearly twice the size of Lake Ontario, sends a broad river to the Zambeze. The Nile, Zambeze, and Congo rank among the great currents of the earth. In view of its altitude, the Great Plateau

may become a healthful abode for the white man. The Portuguese of the Congo and the Zambeze, the Dutch and the English of the Cape, and the French of the Ogowai may all hope for life here, as may also the Italians and the Germans.

The African plateau has not been sufficiently explored for us to be able to designate with certainty the culminating summits. Not far from the shores of the Indian Ocean, on the east, the equatorial sun lights up the snowy helmets of Kenia (18,000 feet) and Kilimanjaro, both extinct volcanoes. Kilimanjaro reaches an elevation of 19,700 feet, — at least, this altitude is attributed to it, but it has never been properly measured. So far as known, it is the loftiest mountain in Africa. The *massif* from which it rises is lashed by the rains ten months out of every twelve.

Negroes and Negroids. — **The Slave-trade.** — South of the Sahara,¹ as far as the southern point of the continent, Africa swarms with athletic and prolific negro tribes; and not only with Negroes, but Negroids, or copper-colored peoples with handsomer features than the Negroes and often of even nobler mien than the Whites themselves. Many of these different tribes live and die, rove and hunt, and have no history; others, especially among the Negroids, have founded empires rivalling the greatest of those known to man in the amount of blood shed by them.

Fifteen thousand elephants are slain annually in Africa merely to supply the ivory handles for the Sheffield cutlery, and 51,000 in all. Fifty-one thousand beasts slaughtered yearly! And yet nearly ten times this number of wretched Africans are dragged in shackles over the paths leading from the blazing village where the Arab or the Black man-hunter has fettered them, to the market where he is to sell them. There are more women and children than grown men in the slave caravans, and it is said that three out of four perish from fatigue, heat, and wounds, or under the whip; now, 125,000 Negroes are still sold every year in the markets of the Mussulman or pagan cities of the Nile basin and of the interior or the coast districts of Africa. There would, then, be 375,000 deaths. These numbers are perhaps exaggerated (they are certainly decreasing from year to year), but there is ground for the belief that in the most flourishing days of the slave-trade the bleeding and suffering victims brought to the ports of embarkation left at least 500,000 dead on the dolorous road. Africa has been drained of 100 million men by this horrible traffic, and yet the two Americas, where most of the survivors entered bondage, contain to-day scarcely 25 million Negroes, including mulattoes and cross-breeds.

The Europeans and their American descendants have ceased to import slaves; in the tropical sections which they are unable to cultivate themselves, the labor is performed by Chinese, Blacks, Indians from India, Anamese, Polynesians, and even by Canary Islanders, and by Portuguese from Madeira, the Azores, and the Cape Verde Islands. But the Mohammedans continue to hunt the Negro, and this inexhaustible race furnishes them servants for their houses, fellaheen for the fields, mechanics, craftsmen, and stalwart soldiers for their armies.

The entire African continent is destined to be seized by the European nations; they have already grasped Algeria-Tunis, Egypt, the Senegal and Niger regions, the Congo, and the southern Triangle. But the Europeans are unable to colonize directly, except in the temperate regions, namely, in the Tell, in the Cape countries, and probably in certain sections of the central plateau. Everywhere else, France, England, Portugal, and the Boers will be compelled to found nations analogous to the Brazilian. Now, the French and the Lusitanians have no repugnance to alliances

¹ And to a certain extent in the Sahara.

with the Blacks, but the English and the Dutch regard the woolly-headed race with horror; this antipathy is at once their weakness and their strength. As for the Germans, the latest comers, they have not yet been brought face to face with the Negroes nor with the protected Negroids;¹ neither have the Italians, who watch Abyssinia, Shoa, and Galla land from the Red Sea, nor the Belgians, who have recently become "protectors" on a grand scale over the 800,000 or 1,000,000 square miles of the Congo Free State. The Europeans will explore Africa, plunder it, exhaust it, transform its races, subvert its ideas, and destroy its languages; but the task will be a long and difficult one, for seven-tenths of the continent lies within the tropics. Moreover, the northern and north-western countries are Mussulman, and these will be less easily subjugated than the pagan lands of the centre and south.

EGYPT.

Ancient and Modern Egypt.—Egypt is the node of the old continent; it unites Africa and Asia by the Isthmus of Suez, and forms, now that the Isthmus is pierced, a highway between the Occident and the Orient.

This country gave to the world one of the first civilized peoples whose history is known to our brief memory. Egypt instructed Greece, and through Greece Rome and the modern civilized nations. In its manners, its institutions, and its imposing architecture, its stream, of unknown source, so regular in its flood and ebb, so beneficent, so reparative, this little world apart was neither Africa nor Asia,—still less was it Europe. Bereft of its Pharaohs, it was no longer independent, but subject to the Persians when it fell into the hands of that warrior who overran the Orient from the Bosphorus to the Hyphasis, until he made the indefatigable Phalanx sue for mercy. He founded here, near the mouths of the Nile, the city named after himself, Alexandria, and later this city became the second city of the Roman Empire and the chief mart of the world. After Rome and Byzantium came the Arab, who blights whatever he touches; and after the Arab the Ottoman, who is destitute of all regenerating power. The Ottoman has lately been superseded by the Englishman; while the latter is enriching himself here, if he stays long enough, the Arab fellaheen will increase in numbers, and will possibly arouse to a consciousness of their own strength; meanwhile, Greeks, Italians, Catalans, and French will continue to flow into the cities.

Much enlarged or rather much elongated by its viceroys, Egypt now comprises within its limits Egypt Proper, Nubia, and Egyptian Soudan,—Kordofan, Darfur, etc.,—in all, 1,120,000 square miles with 17½ million inhabitants; these figures include the conquests in Soudan, which are not yet securely established.² The Egyptians are

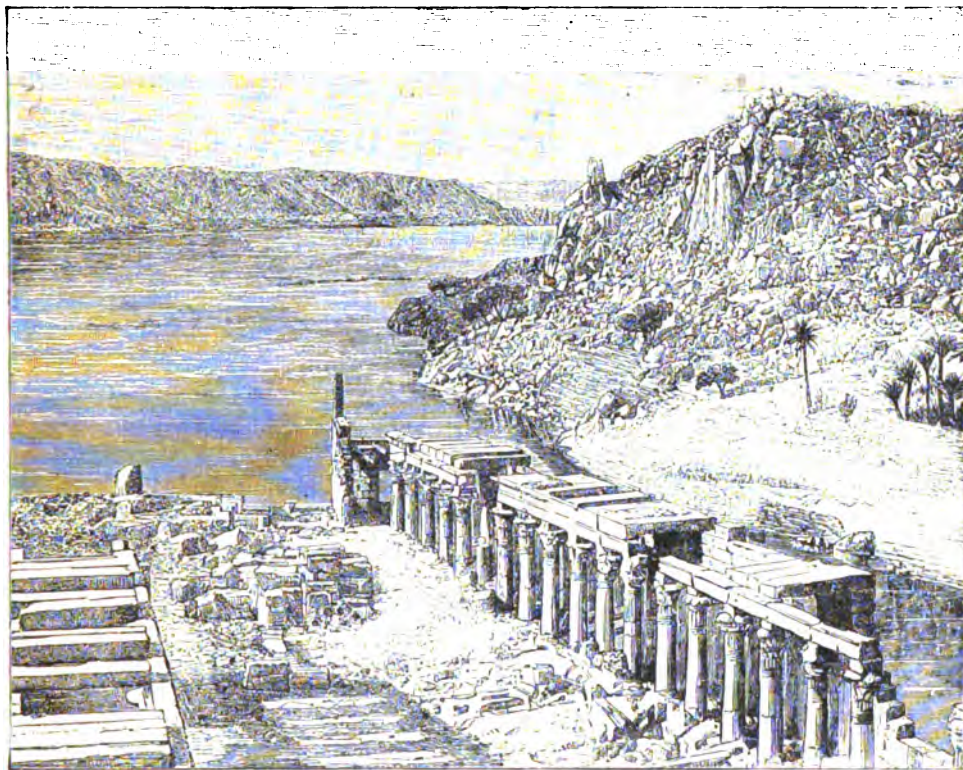
¹ It is only since 1885 that the Germans have pursued the policy of establishing protectorates in Africa and elsewhere.

² The situation in Egypt has undergone a great transformation since the writing of the above. The whole of the upper valley of the Nile, and the vast districts which had been brought under Egyptian rule almost to the equator, have been virtually abandoned. Emin Pasha, the last of General Gordon's lieutenant-governors, down to 1889 partially held his province, known as the Equatorial Province. This is a region about two hundred miles long and about one hundred fifty broad, and contains between one and six million inhabitants; it lies within the present British sphere of influence. The story of Emin's retreat and the fortunes of the Stanley Relief Expedition are familiar to every one.

The territory now ruled by the Khedive is limited to the valley of the Nile as far as a point above

nominally ruled by a viceroy, called the Khedive, who pays a tribute to Turkey, but at the present moment they are in a way subject to England.

Egypt Proper. — The Nile. — In Egypt proper the cultivable lands occupy scarcely 10,000 square miles, and 5500 of these are embraced in the Delta. The rest of the surface consists of sandy, stony tracts, which it is impossible to irrigate owing to their elevation above the only running water that the country possesses. All the life of this famous land, the Misr of the Arabs, and the Khem of the Copts, is in the Nile, and it also owes its historic renown to the Nile alone; it is situated in the bosom of a



THE NILE AND THE ISLAND OF PHILÆ.

desert which knows no history, and outside of the limits of the valley (685 miles long, with a breadth of 4 to 14) life ceases.

The Nile is the second river of the globe as to length, being surpassed by the Missouri-Mississippi alone; including all curves, its length is considerably over 4000 miles. But it is far from occupying the same rank as regards volume.¹ In Africa itself, the Congo drains from a more extensive basin a tribute far superior to that

Wady Halfa, in lat. 22° N., to the oases, the Sinai peninsula, and the Land of Midian in Arabia. The total area is 394,000 square miles. In 1882 the population was 6,817,265. The area of all the abandoned dependencies of Egypt included in the above estimates is fixed at about 726,000 square miles, and the population at 11 million. — Ed.

¹ The length of the Nile is given by most authorities as 3370 miles; its low-water current is 61,500 cubic feet per second. — Ed.

which the Nile receives from its 1,085,000 square miles, 431,000 of which, it is estimated, are in savannas, 288,000 in forests and cultivable lands, 207,000 in steppes, and 159,000 in sheer desert. The Nile is nevertheless a mighty current, with floods exceeding 459,000 cubic feet per second, and a mean of 167,725; in volume, therefore, it stands fourth among African streams, after the Congo, the Niger, and the Zambeze, and probably twenty-seventh in the entire world — that is, in the same rank with the Atrato, a South American stream having a catchment basin scarcely a hundredth as large as its own.

The Victoria Nyanza, the Leman of the Nile, is crossed by the equator near the northern extremity; it receives several Rhones, the sources of which no explorer has seen. As in the days of the Greek and the Roman, we are still unable to say, "Here is the fountain of the divine stream." The chief of the streams flowing into Nyanza



EGYPTIAN SCULPTURE—MARKING CATTLE.

is the Kagera, or Tengure; it reaches the blue lake as a turbid, deep, swift river, bringing to it the surplus waters of Lake Akenyaru, now called Lake Alexandra. It is estimated that Lake Alexandra (1000 [?] square miles) lies 4347 feet above sea-level, and that the Tengure, or Alexandra Nile, rises nearly 2500 miles from the mouths of the stream, as the bird flies — south of the equator, near the 5th parallel. The source of the Mweru is still farther southward, at an elevation of about 5000 feet, near 5° 30', but it is now thought that this torrent ends in a lake with no outlet, and that it does not reach the Shimiya: the latter was once considered the principal branch of the Nile, but it is manifestly inferior to the Tengure, as well as to the Katonga, another large tributary of the Victoria Nyanza. Nyanza may be regarded as the second freshwater sheet of the globe, Lake Superior being the first. Its area of 25,675 square miles¹ exceeds that of the Aral Sea, that of Lake Huron, and that of Lake Michigan.

¹ According to Stanley's latest calculations, the area of Nyanza is 26,900 square miles. Some authorities place the figures somewhat higher. Reclus gives the area of the Aral Sea as 25,400 square miles, and Lake Huron covers about 21,000. — *Ed.*

The term Nyanza signifies lake, the lake *par excellence*. Another name for it, Lake of Kerewe, is derived from its largest island, Ukerewe, situated very near the southern shore. The greenish-blue waters of this Nyanza are deep; the lead has been known to sink in places to 580 feet. Different explorers assign different altitudes to this sheet; the lowest estimate made is 3307 feet, and the highest 4242. It has a coast-line of fully 875 miles, not including the infinitude of insignificant indentations.¹ It contains a large number of islands, especially in the north-west and the south. Their area is estimated at 1400 square miles.

Among the empires or kingdoms, as one may choose to call them, which encircle Nyanza, Uganda,² a delightful country, borders the northern shore. The converted young despot Mwanga, who rules at present over this region, is said to command 5 million pagan, polygamous Blacks;³ but of these 5 millions by far the larger proportion are females. The incessant warfare waged against their neighbors, and the custom of massacring all the adult males after a victory, have reduced by nearly a half the masculine portion of the population of these splendid plateaus; Uganda particularly has superb lands, a charming climate, two rainy seasons, or, more correctly speaking, it rains there every month, and the greenest foliage adorns the fields; two harvests are gathered yearly. The 5 million inhabitants occupy a territory of about 20,000 square miles. There are fine roads from Rubaga, the former capital; the temperature of this city fluctuates annually between 50° or 52° F. and 93° or 95°, with a mean of 70° to 72°, like many a city of the southern Mediterranean; now, Rubaga is nearly under the equator. The Uganda⁴ are very closely allied to numerous peoples living around the other great lakes of the African plateau and on the Congo and the Zambeze, and as far south as the mountains of the Cape of Good Hope. From the Bechuanas, the Basutos, the Zulus and other Kafirs, to the Uganda and the Uanyoro, their neighbors on the north-west, Africa pertains to the great Bantu race; this race is diverse as to its peoples (which are Negroids or Blacks of various hues and shades) but one as to language (dialects apart). It is thought that the Bantu idiom which has lost the fewest forms, rejected the fewest inflections, discarded the smallest number of names, and distorted the fewest roots, is the idiom of Uganda; this tongue has become quite widely known since the Mohammedan, Catholic, and Protestant missionaries began to dispute for the conversion of the Uganda, who obstinately persist in their idolatry, but who are gradually becoming impregnated with European ideas.

The Kiviri escapes from Nyanza; the English, who have christened this Nile as royally as they have the lake, call it the Victoria Nile. At its very exit from the lake,

¹ Including all irregularities, the coast-line is estimated at 2000 miles. — Ed.

² In Bantu, the language of these plateaus, the prefix *u* signifies country; as, for example, in the names Uganda, Uzinja, Ugana, Usoga, Uanyoro, etc.

³ The movements of the Uganda ruler are at present exciting much interest in the Christian world. Not many years since, Mwanga suddenly began the massacre of such of his subjects as had embraced Christianity under the teachings of the missionaries stationed among them. Scores of native Christians were soon burned at the stake. It was to avoid encountering this savage tyrant that Stanley proposed to take the Congo instead of the Zanzibar route for the relief of Emin Pasha. In October, 1888, Mwanga's despotism had reached such a pass that the Mohammedans and Christians joined their forces and deposed him. But soon after his departure from Uganda hostilities broke out between the Moslems and Christians. In a short time the news was received that Mwanga had been converted to Christianity, and in 1889, by the aid of English traders and missionaries, his throne was restored to him, when he placed himself under British protection. — Ed.

⁴ The Bantu prefix *ua* designates the totality of the people of the country: for example, Uganda, Ukuri, Uanyoro, etc.

the stream descends in four arms by the Ripon Falls, a drop of about 12 feet. Its course from the highest to the lowest of its lakes is necessarily rapid, for the surface sinks 1600 feet between them. After having been stilled once in the 200 square miles of Gita Nzige (Lake Ibrahim) and again in the 300 square miles of Koja, or Kapeki, a swamp rather than a lake, it hastens on its way under the English title of Somerset: it flows noisily in rapids and low cataracts, with rare intervals of quiet, sometimes with a width of 250 to 350 feet, sometimes of 1300 to 1600. For nearly 20 miles, as far as the gloomy crags of Shoa Moru, it is a furious, rock-bound torrent; there it contracts to 160 feet, and plunges 115 feet in the Murchison Fall. The roughest part of the journey terminates at this point; the river gradually calms down and flows toward the Mwutan Nzige, or Locust Lake, or Albert Nyanza.

The Mwutan Nzige is not a Victoria Nyanza. With a length of 105 miles, a breadth of 6 to 30, and an area of only 1800 square miles, it would require 14 or 15 times its surface to make a basin equal to the sea of the Uganda. But it is a far more beautiful sheet than the latter. Its sea-green floods slumber or rock between proud mountains of porphyry, granite, or gneiss, from which long ribbons of water float with the breeze. On the south-west stretches the Albert Edward, which is probably less vast than Albert Nyanza, and was once thought to send its surplus waters to Lake Tanganyika.

On issuing from the Mwutan Nzige, about 2300 feet above the seas, the Nile takes the Arabic name of Bahr al-Djebel, or River of the Mountain. It flows for a long distance still through defiles, passing here and there an abandoned fort, one of those from which the Egyptians essayed to rule the country of the upper Nile. It is sometimes broad, sometimes narrow; it is stirred by rapids, none of which is formidable; then the vast plain opens above Gondokoro, a ruined town which was once a celebrated mission-post and a station from which parties set out for exploration and conquest. Though already so far from its sources, and though issuing from at least two lakes, one of which is eight times, the other 110 to 120 times, the size of the Lake of Geneva, the mean annual flow of the Nile at this point is not over 19,400 to 19,800 cubic feet per second. In the plain it straggles through alluvia occupying what was once an immense Soudanese lake. It flows in numberless arms, and is often wholly covered by the *sedd*, or *sud*, a mass of floating plants, which become bound together beyond all possibility of disentanglement, so that the stream is frequently too much obstructed to permit the passage of boats. The region most blocked by the accumulation of vegetable flotsam is found along a large island, 130 to 140 miles long by 6 to 40 broad, formed by two arms of the stream, namely, by the Bahr al-Zeraf (Giraffe River), on the right, and the Bahr al-Djebel, on the left; the former of these arms is already almost obliterated; the latter, which is the true river, unites on its way with the Bahr al-Ghazal. This last, a large tributary, is likewise overgrown with compact vegetation — a floating raft often adorned with water-lilies of wonderful beauty; it has a length of 715 miles, and drains nearly 175,000 square miles; it is powerful during the floods, but dwindles to almost nothing in the driest seasons, as, indeed, do all the streams which converge to the Bahr al-Ghazal, and which it carries to the Mokren al-Bohur, the water expanse where it encounters the Nile. The Mokren al-Bohur is the portion most blocked by the *sedd*, but just here this long "Sargasso Sea" terminates under the assaults of the Bahr al-Ghazal. When the annual freshets convert the stream into an irresistible torrent, the obstruction is broken up and carried off by the current.

The Bahr al-Ghazal is the last affluent of the Nile on the left — 2300 miles from



A FELLAH WOMAN.

the Mediterranean! On its right, the Nile receives the Bahr al-Zeraf; a little farther down, it is swollen by the Sobat, a river as yet but little known, but to which a length of 680 miles is attributed. Its milky floods are slow in disappearing in the dark brown floods of the Nile; after the waters have mingled, the Nile is of a whitish color, and thereafter it is called the Bahr el-Abiad, or White River. After bathing the villages of the pastoral Shilluks and Denkas, it encounters at Khartoum, 1300 feet¹ above the sea, the Bahr el-Azrak, or Blue Nile, which issues from the Abyssinian Tana, a much smaller but much more elevated lake than the Nyanza of the Nile.

The Bahr el-Azrak, 930 miles long, rolls at low water 5614 cubic feet of blue waters, which are long in mingling with the white, clayey floods of the Bahr el-Abiad; in the heaviest freshes, 215,532 cubic feet of red waters whirl over its bed (1600 to 3300 feet broad), dragging with them clay and sand charged with oxyd of iron, the most precious ingredients of the Nile alluvia; another Abyssinian river, the Atbara, running parallel to the Blue River, and so scant that it does not always reach the Nile, likewise rolls this red mould which fructifies Mizraim. To the Blue Nile's high-water volume of 215,532 cubic feet per second, the White opposes only 176,727, but to the former's low-water flow of 5614 cubic feet the latter opposes 10,487, and its yearly mean is the greater of the two. The White Nile and the Blue Nile combined carry, then, below Khartoum, only 16,101 cubic feet per second in the lowest waters, and 392,259 in the highest floods.

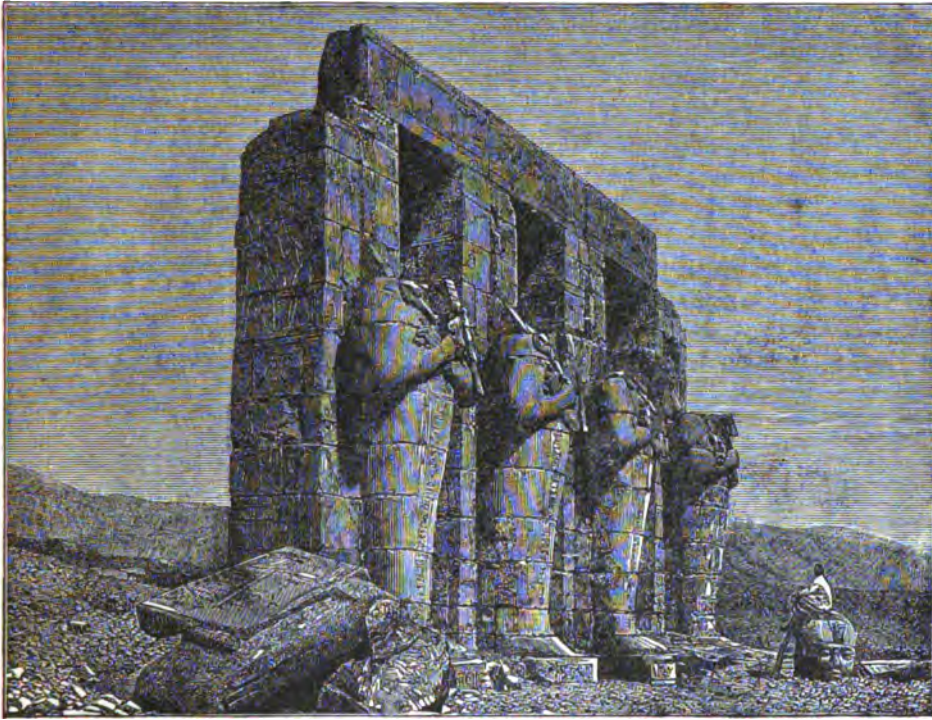
A last chain remains to be vanquished by the Nile, a range of sandstone and granite hills through which the stream flows in cataracts, or, rather, in long rapids. These celebrated cataracts of the Nile are six in number; there is in fact little that is imposing about them, but everything pertaining to the mysterious stream was miraculous to the ancients. The first cataract, called the sixth, — for they have been counted starting from Egypt, — the Cascade of Garri, a mere rapid between granite walls, is the "Nubian Gate," at the upper threshold of Nubia; the sixth, called the first, near Assuan, at an altitude of 330 feet, is the "Egyptian Gate," at the threshold of ancient Egypt; the most beautiful of all, the second from the delta, is just above Wady Halfa; it is nothing more than a long rapid, a maze of channels and canals cut through the rock: none of these thousand passages is walled in by cliffs sufficiently high to blacken the waters, and the scattered streams descend with no hoarse rumblings or thunderings. These long constrictions retard the course of the Nile, to the great advantage of the peoples whose gardens it irrigates. If it flowed more swiftly, if no obstacle intervened between Khartoum and Egypt, the rise would be more rapid, the floods of shorter duration, and the volume at low water would be wholly insignificant in Egypt. The same thing is true of the Senegal and the upper Niger, where rocky reaches store enough water during the wet season to strengthen the flow during the droughts. Near the great Abu Hammed bend, below the fourth cataract, the irrigating canals begin, and the stream diminishes from this point.² The waters and alluvia are distributed by 8530 miles of canals, without the accession of a single visible affluent, brook, or rill.

In the Egyptian portion of the valley we find the up-stream curves reproduced, and the same floods, turbid or clear, according to the season, with a breadth varying from 1600 to 7200 feet; on the banks, countless birds plunder the grain-fields or snap

¹ The altitude of the confluence of the two Niles is variously estimated at 1240 to 1420 feet.

² It diminishes less than we should expect, considering the amount of water drawn off, with no influx from tributaries. Bottom springs evidently repair the loss.

up the fish from the inundations; everywhere are the same large villages of clay or sun-dried brick, the same crops, — rice, cereals, indigo, cotton, and grass, — and the same palm-trees, under the same implacable sky. Along the banks, as far back as the desert region of the mountains, are groves of noble palms, with their roots in the waters and their tops in the burning Saharan rays. The Libyan rocks, on the west, and the Arabian, on the east, alone exhibit any variation in the scenery: near Assuan granite prevails; then sandstone predominates, and afterward limestone. These two ranges, running very near together, and parallel for a long distance, do not resemble each other closely; the Arabian rampart is higher, with harsher lines, and a greater number of peaks and fissures. At Keneh there is even a species of fault where the



COLOSSI OF THE RAMESSEUM, THEBES.

Nile may have flowed in ancient times. The sacred river moves between ruined temples and palaces, columns and sphinxes, and cliffs riddled with sepulchral grottos. Five hundred million mummies, as many as the living inhabitants of Europe and Africa, are laid in this valley, which has witnessed the passing of so many generations. These black, grimacing, parchment-skinned images, drier and ghastlier than skeletons, sometimes have as companions the mummies of animals, so that, on entering their subterranean world, our eyes still dazzled with the glowing picture of living Egypt, we behold by the glimmer of the torches the rigid caricature of dead Egypt. Beyond Thebes of the hundred gates, beyond the old cities of Tentyra, Ptolemais, Antinoë, and Memphis, beyond Cairo, the present capital, and almost under the very shadow of the pyramids, the Nile bifurcates and encloses its famous delta, the first

that ever bore this Greek title. The mass of alluvia is about 110 miles long, and 130 broad at the base, with an area of 8570 square miles. According to ancient accounts, the stream once emptied into the Mediterranean by seven arms; but there are only two branches to-day, the Rosetta Nile and the Damietta. The latter, which is 14 miles longer than the former, discharges only 7100 cubic feet per second at low water, while the Rosetta arm carries 8650;—15,750 in all,—a flow which is often diminished in dry years to 11,650, and yet in length this is the second stream in the world. Neither arm is navigable.

Instead of carrying its mire out into the deep sea, the Nile deposits it as alluvia over the country which it irrigates; it is slowly filling up the delta lakes of Menzeleh (460 sq. m.), and El-Burullus, the Lake of Aboukir, the Lake of Edku, and the Mareotis of Alexandria. All of these lakes are shallow. They are separated from the Mediterranean by a littoral cordon. The delta makes a yearly gain of only 8 feet on the sea, but the surface of lower Egypt is said to have been raised 20 feet since the time of the Pharaohs. But for the regular inundations of the Nile, and the fertilizing properties of its alluvia, nothing would grow in the Egyptian valley, which is, nevertheless, covered by a stratum of mould 30 to 40 feet deep; this mould has been deposited from year to year, and from century to century, by the green flood from the sedd-obstructed swamps, the whitish floods from the clayey plateaus, and the reddish floods from the Ethiopian mountains. Of the 4237 billion cubic feet of water which the stream rolls during the twelve months, 3178 billion are discharged during a single trimester, from the fifteenth of July to the fifteenth of October. The water begins to rise at the entrance into Egypt about the tenth of June, and it begins to abate about the seventh of October. The Nile is generally lowest in May; in the floods it is 23 to 26 feet above low-water mark at Cairo, and 52 to 56 at Assuan, near the Egyptian Gate.

Climate.—Though the general aspect of the country varies according to the rise or fall of the stream, the climate is uniform. An eternal summer hangs over Egypt, but the atmosphere is so dry that the heat can be resisted better than in many a tropical or equatorial region. It is not overpowering except during the seasons when the formidable Khamsin (Sirocco) rages. (The term Khamsin is derived from the Arabic word *khams*, five, and is given to this wind, we are told, because it blows five days in succession). It rains very little in Egypt. Alexandria, which lies close to the Mediterranean, has an annual fall of only 8 inches, while Cairo receives only 1½ inches. The Suez Canal is said to have mitigated, to a certain extent, the dryness of Egypt. But what can a few pools stretched along a mere ditch effect against cosmic laws.

The Egyptians. — Arabs. — Copts. — Foreigners.—The narrow Egyptian valley was once inhabited by 10 to 15 million men, or, according to some authorities, by 20 to 27 million. The Egyptians of to-day scarcely exceed 6,800,000, but they dwell, we must remember, on about 10,000 square miles, all the rest of the surface being composed of desert tracts. These inhabitants are largely Arabs, that is, Arabs in language rather than lineage; for the Mussulman invaders found the lower Nile densely peopled by the descendants of the old Egyptians, in whose veins flowed the blood of the various races that drank the water of the sacred stream under the pre-Pharaohs, the Pharaohs, the Persian emperors, the Greek Ptolemies, and the Roman pantocrats,—black or bronzed Ethiopians, Arabs, and Himyarites of the olden times, and fair-haired and dark-haired men from the east and the west, or from across the northern sea.

The Arabs of the Invasion did not destroy the Egyptians, who made use of a language closely related to their own; they formed alliances with them, they fashioned them to their idiom; and the Koran, their sacred book, to all appearance, transformed every native who embraced Islamism into an Arab. Proselytism has succeeded in reducing these aborigines, represented to-day by the Copts, to 300,000, or something over: the Copts are fanatically opposed to all Christians not of their own sect, or, in other words, to nearly all Christendom. The features of the Copt show clearly enough his origin; they resemble closely those of the mummies piled up in the sepul-



CAIRO WATER-BOYS.

chral rocks along the stream. The people formed from the alliances of the invading Arabs and the invaded Nilotics was afterward penetrated by numerous elements. The Turk having ruled for 300 years over Egypt, the Egyptian people absorbed from the Turk; and the Mamelukes, — who were Negroes as well as Circassians, Caucasians, Albanians, Greek renegades, Slavs, or Latins, — having riveted the shackles of slavery for the Osmanli, it absorbed from the Aryan Mameluke, from the Turanian Mameluke, from the Semitic Mameluke, and from the Hamitic Mameluke; the negro, the bronzed, the copper-colored, and the white girls sold in Caucasia by father or brother, the black or negroid men stolen, lance in hand, from all Soudanese countries

accessible to Egypt, entered deeply into the essence of this so-called Arabic nation, and they are entering it now as much as ever. Lastly, 91,000 Europeans, — Greeks, Italians, French, Maltese, English, Germans,¹ etc., — residing in Alexandria, in Cairo, and in all other cities of any considerable size, and along the Suez Canal, bring a few drops to this old and turbid torrent.

Of the 6,800,000 Egyptians returned by the census of 1882, nearly 250,000 are Beduins, representing the more or less nomad element, and comprising the only genuine Arabs in the whole nation. But the Beduins themselves are widely and diversely mixed. The mass of the Egyptian people is composed of fellahen, — gentle, submissive, frugal peasants, easily satisfied as regards food, drink, clothing, or lodging, and getting their happiness out of the sunshine and the shade. Their life is hard. These poor creatures are taxable and workable at their lord's discretion, and they toil in an enervating climate; they cultivate, irrigate, plant, and harvest, they clear the canals of mud, and repair the breaks made by the Nile in the dikes. The European contributes little except by immigration to the annual gain in population, which reaches 50,000. Egypt has the grossly exaggerated reputation of devouring all the foreigners who emigrate thither, or, if it spares these strangers, as is often the case, it is said to destroy them in their posterity. As for the Arabs, the soil is healthful for them, and the climate perfect; they increase from their own strength, and at the same time by the infusion of black blood. Though of quite small stature, they are nevertheless supple, strong, and agile, endowed with physical resistance, and often with delicacy, nobility, and beauty of features. •

Arabic is the common idiom. Coptic, the legitimate descendant of ancient Egyptian, has totally disappeared, even from the Christian convents, where it was muttered and sung long after the faithful had ceased to understand it; yet all Egypt still spoke it about the year 1000, and it held out well against Arabic until after 1500 or even 1600. Among foreign tongues, French and Italian are the most widely used.

Cities. — The residence of the viceroy, Masr el-Kahireh, or Masr the Victorious, which we call Cairo, is the queen of Arabic as well as of African cities; its inhabitants number 375,000, a few thousand of whom are Europeans, mostly from the south of Europe. Cairo is situated 5900 feet from the Nile, at the base of the rocky range of Mokattam. It rears 400 minarets, and numerous cypresses and palm-trees above old alleys, — twisted, but dark and cool, — which have been recently cut by sunny and dusty boulevards, in imitation of Paris.

Higher than the tallest trees, higher than the prayer-towers, the pyramids lift their forms beyond Gizeh. These monuments, 40 centuries old, hide in their chambers, blacker than night, the mummies of Pharaohs and sacred beasts; these enormously massive structures consumed generations of slave-builders. The most huge, that of Cheops, a block of 88,275,000 cubic feet, is 449 feet high, and it was once nearly 500. The Great Sphinx, to the east of the Second Pyramid, was sketched by nature and finished by man, in a sandstone rock; it is a man-headed lion, 188 feet 9½ inches in length.

Ascending the Nile, near Cairo, we find the site of Memphis, which in ancient times rivalled Thebes; and which has been more completely stripped of its temples and palaces than Thebes itself. In the silence of this dead city, a lithe forest of palms shivers in the lightest breeze; with the last of these gardens of date-trees, with the first sands of the desert, the yellow Sahara begins; and we enter the vast necropolis of Memphis. There the Pyramid of Steps, one of the Pyramids of Sakkarah, rises

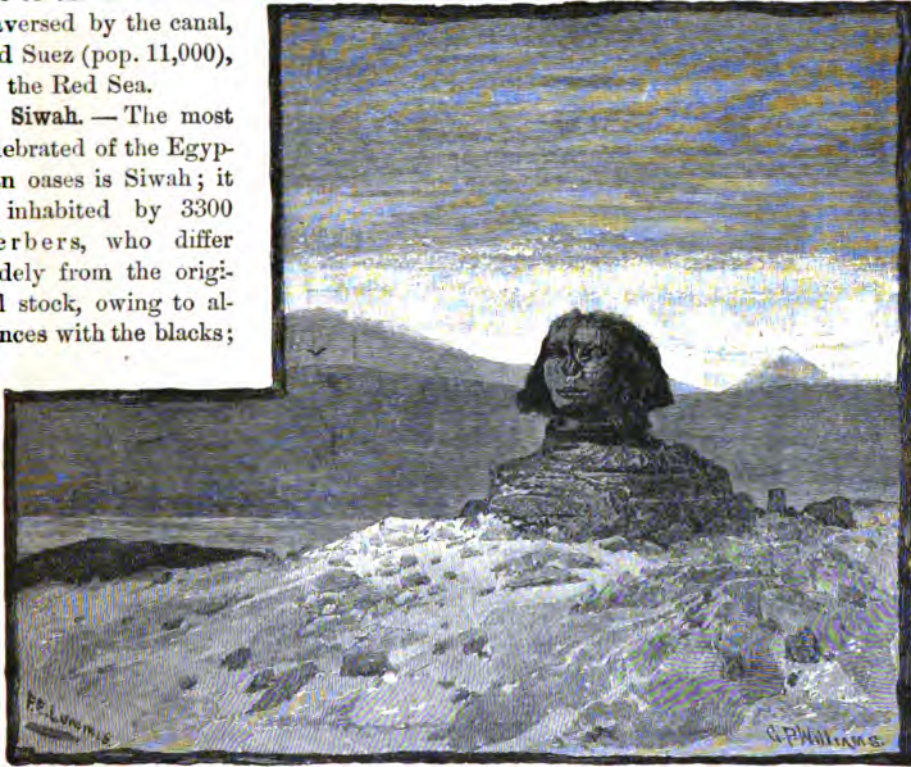
¹ About 37,000 Greeks, more than 18,000 Italians, nearly 16,000 Frenchmen, and 8000 Austrians, the latter mostly of Italian speech.

motionless out of the reflecting dunes. In this monument we salute perhaps the most ancient structure built by man's hand; it is said to be 6500 years old at least.

Alexandria (pop. 213,000), a Greek, Italian, French, and Levantine, as well as Arabic, city, is a large commercial town, situated between the Mediterranean and Lake Mareotis, at the embouchure of the Mahmoudieh Canal, which is derived from the Nile.

Three half-Arabic, half-European cities border the Suez Canal. They are only moderately thriving towns, although the ships of all the nations of the world pass by thousands through this channel.¹ They are Port Said (pop. 17,000), on the Mediterranean; Ismailia, on one of the saline lakes traversed by the canal, and Suez (pop. 11,000), on the Red Sea.

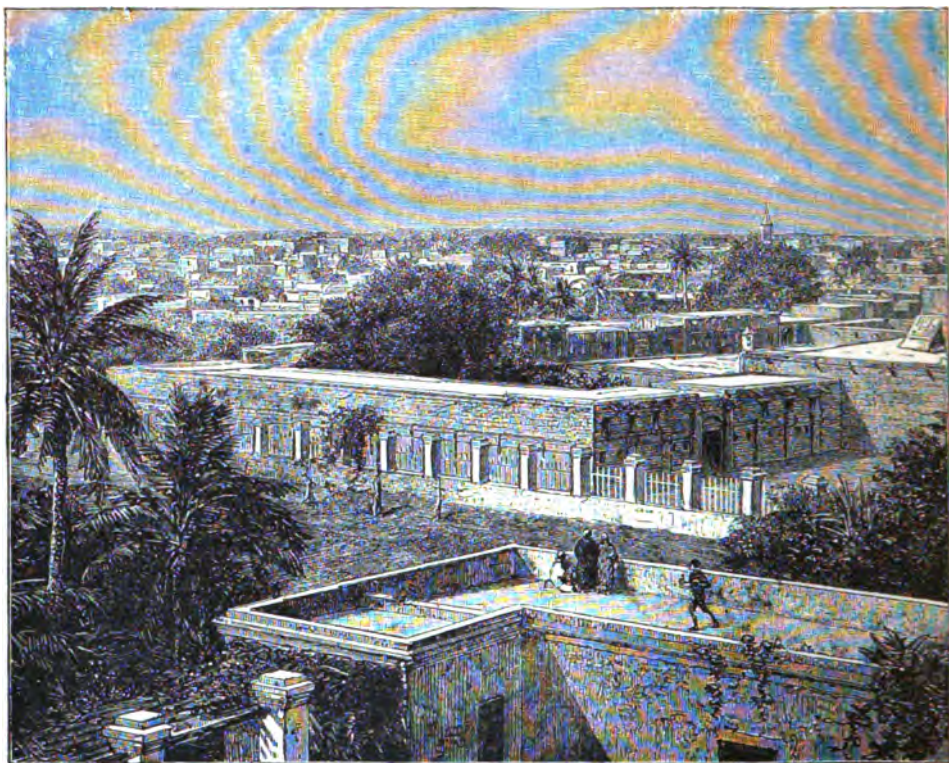
Siwah. — The most celebrated of the Egyptian oases is Siwah; it is inhabited by 3300 Berbers, who differ widely from the original stock, owing to alliances with the blacks;



THE SPHINX.

but, though they have become Soudanese in features, they speak a Berber dialect, which would be understood without much difficulty by a mountaineer of the Greater Atlas range, or of Great Kabylia. This handful of men are separated from the rest of the world by a burning desert; they dwell at the foot of fantastic rocks, 95 feet below the level of the ocean, in a hollow which was once, perhaps, a bay of the Red Sea or of the Mediterranean; it is possible that the other Saharan depressions which are below sea-level may have been ancient gulfs. Siwah and Aghermi, the two towns of the oasis, are both built in the form of an amphitheatre; the latter preserves a few vestiges of the temple of Jupiter Ammon, an ancient oracle, whose enigmatic decrees were sought by people from Egypt, from the Orient, and from Greece.

¹ The Suez Canal is 102 miles long, varying in width from 200 to 330 feet; it is from 26 to 28 feet deep.



KHARTOUM.

FORMER DEPENDENCIES OF EGYPT.

Nubia.—This country, closely resembling Egypt, which it prolongs toward the south, derives its name from the Nubas, a more or less autochthonous people, on the banks of the Nile; if the Nubas were ever a powerful nation, they are reduced to-day to insignificance. In Nubia, as in Egypt, the valley of the Nile comprises all the habitable land; it embraces 1470 square miles, out of 200,000 to 225,000. The soil is remarkably fruitful wherever it is irrigated by one of the canals drawn from the stream; the temperature runs as high as 120° F. in the shade, and between the Egyptian Gate and the Nubian Gate food can be cooked, it is said, in the sand, with no other fire than the sun's rays. But, though the days are blistering, the nights are cool; and at times, when the north wind blows, it is even cold. The chilliness of the nights, the overpowering heat of the sun, the almost dewless desiccation, as well as the extreme healthfulness of the climate, the dunes, the shifting sands, and, in the distance, motionless mountains of granite, lava, or limestone,—all these features of the Nubian Sahara are a repetition of the Egyptian. The Nubian Nile is also a reproduction of the Egyptian Nile; in ancient times it mirrored, on both banks, temples, pylons, sphinxes, colossi and pyramids, and rocks perforated with mortuary grottos. In the southern part of the country, south-east of Dongola, and north-west

of Khartoum, there is a scant rainfall; and the Nubian desert, losing something of its aridity, takes the name of the Bahiuda desert.

The northern Barabras, the Danaglas or southern Barabras, and the Nubas, all black peoples which have been variously mixed with other Negroes, form the groundwork of the Nilotic Nubians; these good fellaheen assiduously cultivate and irrigate the soil under a flaming sun; they have been excellent Mussulmans ever since their conversion by the Arabs to a belief in the one God. The pastoral nomads of the desert, who rove on both banks of the Nile, are more or less pure Arabs; all claim to be of direct Arab descent, but many have not a drop of Arab blood in their veins; nevertheless, the language of the Koran is marching rapidly to the conquest of the country. The Bisharin form the dominant element among these shepherds. The people springing from the fusion of races in Nubia has its roots in Arabia, Ethiopia,



NEGRO MUSICIANS.

and ancient Egypt; but many points concerning its affinities and origin are still matters of conjecture. Its faith in Islam, and the use of the Arabic tongue, are gradually shaping it morally.

Dongola, 6500 feet from the left bank of the Nile, is an insignificant town of 7000 souls; its houses are roofed, instead of being built *à terrasse*. Dongola lies outside of the entirely rainless zone, and a year seldom passes with no storms or showers.

Egyptian Soudan.—Above Dongola, between the third and fourth cataracts, the ethnic influence of the Arabs ceases to be preponderant. Over the entire stretch of country from the Delta of the Nile to the centre of Nubia, from time immemorial, Whites and Semites have been intermarrying with bronzed and black races; but above this point the Negroes outnumber the Whites, and the pagans the Mussulmans. Beyond the sixth cataract we enter Soudan, and at the same time the zone of rains. Then everything changes. The desert disappears, and we find savannas, swamps,

extensive pasture-grounds, oxen and cows, and pastoral peoples; we find also the lion, the rhinoceros, the elephant, and the hippopotamus.

Khartoum (pop. 70,000), the only town of any considerable note in the country, borders the Blue Nile immediately above its confluence with the White Nile, at the very extremity of Sennaar, a slender peninsula included between the two streams. This metropolis is in mourning for its past greatness, but it may hope for a revival of prosperity, for its position guarantees to it a future.

Ascending the Nile from Khartoum, we encounter divers aboriginal peoples, — Shilluks, Denkas, Bari, etc.; they always have a crow to pluck with the Egyptians, whose yoke they have just thrown off. The Shilluks, estimated at 1,200,000, occupy 3000 villages; they have very thick lips, very black skins, very woolly hair, and they go wholly nude. The Denkas are a pastoral people; they too wear no clothing, and are idolaters. The Bari, living in the regions around Lardo, the town which superseded the now deserted Gondokoro, are likewise shepherds, and go unclad.

Above Khartoum, opposite the Sennaar peninsula, the fructifying power of the Nile acts only in the immediate vicinity of the stream. At a short distance from the left bank, the steppe of Kordofan begins. The desert-like character of this district is due to the scantiness of the rainfall, which does not exceed 13.7 inches annually; and this quantity all falls in the season of the *khariif*, or showers; the *sef*, or dry season, which includes the remainder of the year, is absolutely rainless, so that not one of the rivers of the country has the force to reach the Nile across the sands. About 300,000 inhabitants occupy Kordofan's 77,000 square miles. The surface consists of a plateau, 1300 to 1700 feet in altitude, supported here and there by chains of hills. There are a few mountains, notably Djebel Kordofan (2789 feet). El Obeid, or Lobeid, passes for having a population of 30,000; it is situated 1900 feet above sea-level, about 12 miles west of Djebel Kordofan. As it is under the least implacable sky of the steppe, the greater part of the sedentaries have grouped themselves around it. As for the nomads, they roam over the granitic sands of the plateau seeking pasturage and springs (which are exceedingly rare), or the wells, which have been dug to depths of 80, 90, and even 165 feet, and the waters of which often have a saline taste; they pitch their tents near a baobab, a cluster of tamarind-trees, or a grove of gum-trees; the very presence of this last tree indicates a desert or semi-desert, and the ostrich, which is to be seen here fleeing before the wandering bands, recalls the Sahara itself. Kordofan is evidently desiccating; it partakes less and less each year of the Nilotic character, and more and more of the nature of an arid moor.

Kordofan has not been able to impart any race unity to the roving or settled population. Here again it is the Koran which has served for the unification of the various elements; these elements include Negroes, Nubas, Arab merchants, slave-dealers, preachers, and adventurers. All this mass — three-quarters slaves, we are told — is becoming Arabicized intellectually and morally. It was among the Kordofan inhabitants, who are always ready to seal their faith with their blood, that the Mahdi recently appeared, who dared to lift his yatagan against England.

Darfor, or Darfur,¹ situated to the westward of Kordofan, marks the western limits of the Nile basin; its principal *massif*, the Marra Mountains (6004 feet), composed of lava overlying granite, forms the water parting between certain streams flowing to the Nile, and others which in all likelihood run to Lake Chad. These rivers, however, are nearly dry, except in the rainy season.

¹ Dar Fur, an Arabic term, signifies "dwelling, country of the For, or the Fur."

The area of Darfur is hypothetically placed at about 170,000 square miles; it contains 1,500,000 inhabitants (they have been estimated at even 4 million), 500,000 of whom are shepherds of almost pure Arabic stock, and 750,000 For; the latter are autochthonous Negroes, who speak a dialect which is retreating before the idiom of Islam. The For pasture their goats, sheep, and oxen in the centre of the country, in the Marra Mountains. The capital of Darfur, El Fasher, is a cluster of small cabins, on the caravan route between Kordofan and Waday; it lies at an elevation of 2418 feet, on a pool of water which is dry during several months every year, and the outlet of which belongs to the upper basin of the Nilotic Bahr al-Ghazal.

ABYSSINIA.

Mountains.—Between the burning coast of the Red Sea and the torrid deserts and pasture-grounds of the valleys sloping toward the two Niles or toward the Indian Ocean, stretches the mountainous country known as Abyssinia. Lying only 10 or 15 degrees from the equator, the climate would naturally be excessively hot. On the contrary, it is in no way enervating, but is cool or even cold. The Abyssinian mountains doubtless unite on the south with Kenia and Kilimanjaro. They are higher in the south than the Alps of Savoy (if Mount Usho, in Galla land, does indeed rise to 16,601 feet), while in the north, in Abyssinia proper, their altitude does not exceed that of the Swiss Alps; the Talba Waha, in Godjam, is 11,811 feet in elevation; the mountains of the province of Lasta tower above 13,000 feet, and those of Samen reach 14,750, more or less; in this last district, the Ras Dashan, variously estimated at 14,534 to 15,193 feet, is perhaps the culminating point, or perhaps the Abba Yared (14,708–15,098), or, possibly, Buahat (14,797–16,132). These giants are not seen to advantage; they are scarcely visible, if at all, from the gloomy chasms which divide the enormous Abyssinian acropolis into small impregnable citadels; and, from the plateau which they dominate by not more than 1600, 2000, or, rarely, 2600 feet, they look almost dwarfed.

The mean elevation of the country may be between 7200 and 8200 feet. Gondar is situated at an altitude of 6725 feet; Axum, 7382 feet; Sokota, also, at 7382; Ankobar, 8200; Debra Tabor, above 8500; and Angolalla, at 9186. At these heights the air is extremely healthful, even from May to September, during the rainy season, for the marsh fevers scarcely rise to 6500 feet. Abyssinia exhibits an infinite variety of peaks and domes, of basaltic needles, of pillars or colonnades, and of cones which were once volcanoes.—Six of these mountains are still restless.—Here and there in the pasture-lands an oval or round lake of clear blue water sparkles in an old crater where reddish lavas once glittered. It would be difficult to find a wilder and more chaotic region than this country of four thousand cataracts.

Lake Tsana: the Abai, or Blue Nile.—**The Takazza, or Atbara.**—The largest as well as the most beautiful of the Abyssinian lakes is Tsana, or Tana, called also Dembea; its basin of 1150 square miles is situated at an elevation of 6102 feet. Among the many rivers emptying into it are the Maguetch, the Gumara, the Reb, and, the most abundant of all, the Abai, which rises 8990 feet above the seas. These

impetuous streams roll quantities of débris, but they are all purified in the Tsana. Lake Tsana is supposed to be very deep, whether it be an old crater or simply a hollow formed by the subsidence of the rocks, but it has never been sounded below 236 feet. The Abai flows through the southern part of the lake, and issues from it with a breadth of 330 to 660 feet; this is the torrent, 930 miles long, which joins the Bahr el-Abiad, or White River, at Khartoum, under the name of Bahr el-Azrak, or Blue River. Five miles from the sill of the lake it drops in the cascade of Woreb: farther down, it descends 82 feet in the Smoky Falls (Tis Esat), and from that point to the low plain it twists through a Via Mala worthy of Abyssinia itself, which is the country *par excellence* of frightful cañons. At one spot it flows through a gorge not more than 7 to 10 feet broad; the abyss is spanned by a bridge which was thrown across it by the Lusitanians. On both banks rise perpendicular rocks, 300, 600, or 1000 feet high, and the waters are 2600 feet below the general level of the plateau. The river makes a long semi-circular sweep around Godjam, moving first south-east, then south-west, then north-west. At Famaka it reaches the plain, where it flows with a breadth of 1600 to 3300 feet, and a volume of 5614 to 215,532 cubic feet, according to the weather and hour, carrying with it the red deposits which form the fertilizers of Egypt.

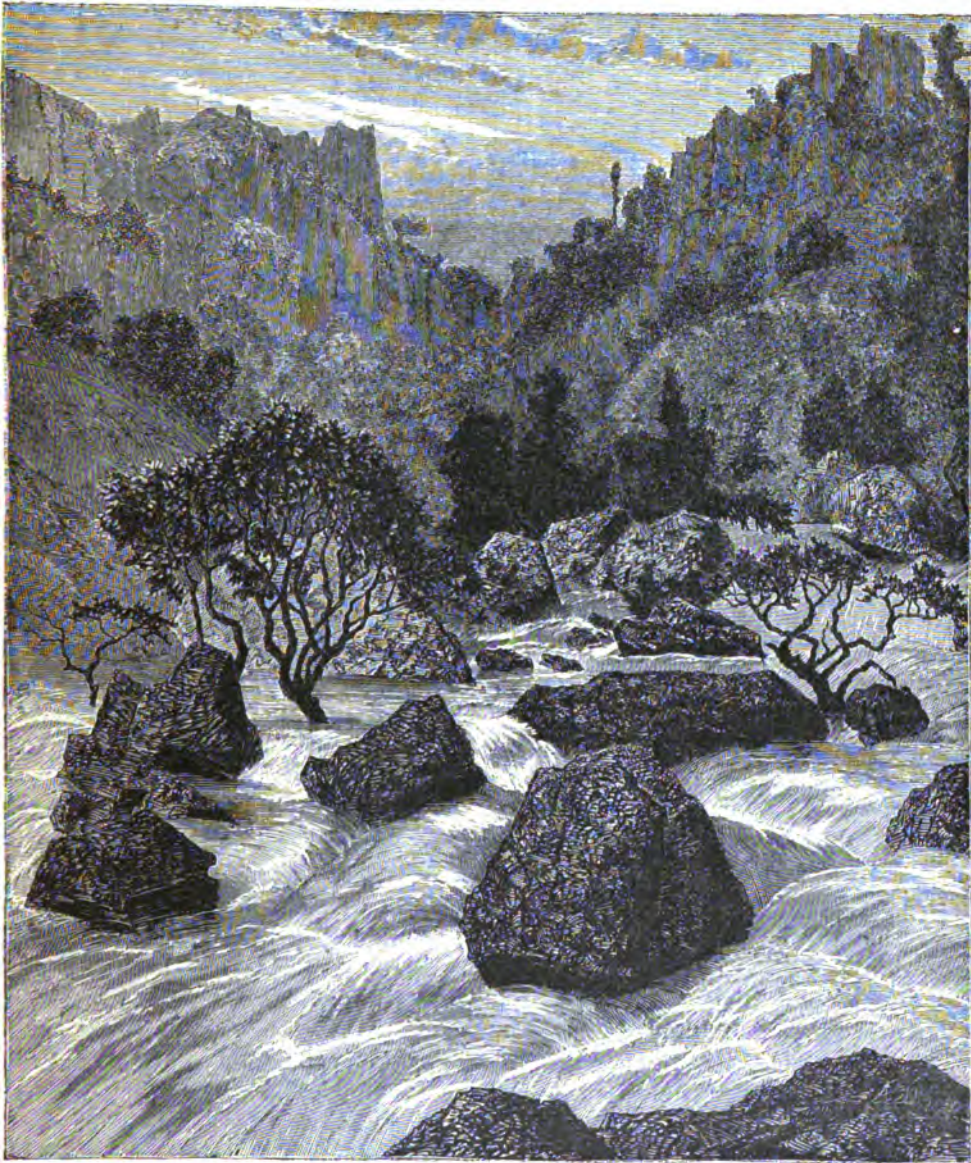
The other great river of Abyssinia, the Takazza, originates in a hot spring. It is under the name of Atbara (adopted from a river much smaller than itself) that, with a mean breadth of 1300 feet, it takes its course outside of and below Abyssinia toward the Nubian Nile, above Berber; it does not always reach the Nile; in the dry season, it is exhausted 200 miles up-stream, by the arid soil, and by skies which give dew but no rain. In the same way, the Mareb, another very long torrent,¹ fails to reach the Atbara at all seasons. The Takazza has no Lake Tsana to purify and store its waters. In June, the month of the heaviest rains on the Abyssinian mountains, the torrents rise 100 feet between their vertical walls; they descend madly, with a thundering noise, to the Takazza, and in a few hours flood the sands with a turbid river. At Sofi, an avalanche of miry waters, 35 to 50 feet deep, may be seen at times, in a bed which was dry gravel only the day before. It is the brown soil borne in these waters which gives the Atbara its Arabic name of Bahr el-Asuat, or Black River.

The Takazza divides Abyssinia into Tigré, on the north, and Amhara, in the centre; Shoa, the most southern of the three principal provinces of Abyssinia, stretches away southward, and blends with the Galla Country. The gorges through which the Takazza winds, between Tigré and Amhara, sometimes measure 2300 feet from the crest of the rock to the black or foaming wave; there are other Abyssinian cañons reaching depths of 3300 or 3900 feet, as along the Djedda and the Bashilo, in the basin of the Abai; and still others of 6500 feet.

Kollas. — Voina. — Degas. — Samen. — Samhar. — Like the Latin republics terraced along the Andes and the mountains of Central America, Abyssinia is divided into the three physical regions of Hot Lands, Temperate Lands, and Cold Lands. The districts below 5900 feet, constituting the hot lands, are called the Kollas, or Kullas, or Kwallas. These Kollas are excessively hot and humid, with giant forests, with huge animals prowling in the tall grass, and with sky and sun favorable to tropical vegetation. The Kollas are not the true Abyssinia; the latter begins with the Voina, or Waina-Deja, between 5900 and 8000 or 10,000 feet; this region owes its name to a

¹ Kassala is situated on the Mareb.

species of vine, from which, either through ignorance or indolence, no wine is manufactured. It was in the Voina that the Portuguese built forts and planted vineyards in their prosperous days. The climate is as mild as that of Corsica; the soil



A CASCADE OF THE LOWER REB.

produces liberally everything that can be demanded of it, from cereals to the vine and the orange-tree. The cold lands, called the Degas, rise above the Voina, to an elevation of over 13,000 feet. If the Voina is an *alma nutriz*, the Degas are the *magna parens* of the peasant and the soldier. Above the cool and copiously watered pasture-grounds

of the Degas, the climate is too cold for any considerable number of inhabitants to be supported with their horses, oxen, and sheep. The loftiest of the districts of Abyssinia is Samen, overlooking the left bank of the Takazza; the lowest is Samhar, or Mudun, between the eastern base of the mountains and the Red Sea. There is little rain in Samhar; but the fall is heavy on the high *debras*; in the middle, temperate region, it is something over 30 inches annually.

Abyssinia might almost stock our menageries from its different terraces, for an infinite variety of animals abounds, from the ostrich or the camel of the burning sands, to the peaceable ruminant of the upland pastures. Here are monkeys, wild asses, striped asses, long-necked giraffes, crocodiles, fallow lions and black lions, leopards and *abasambos* or *wobos* (powerful and cruel felines, whose affinities are but little understood),¹ hyenas, formidable buffaloes, and the three huge pachyderms — the elephant, the rhinoceros, and the hippopotamus.

The Abyssinians, their Languages, their Christianity. — On 127,000 to 130,000 square miles, Abyssinia contains perhaps 3,500,000 inhabitants, and perhaps not over 1½ million; these men call themselves Itiopyavan, or Ethiopians; the term Abyssinian is derived from the Arabic *Habesh*, which signifies mixture or confusion. The Abyssinian people is unquestionably mixed; it was doubtless formed by the alliance of Blacks with brown or dark immigrants, with a later engraftment of Nilotic Greeks and Arabs. The oldest of the Abyssinian races seem to be the Agaw tribes, people speaking the Hamtenga idiom; and with these we may also class the Falashas, who are Jews, and whose tongue resembles the Hamtenga. The inhabitants of Tigré certainly originated, in part, in Yemen, a province of southern Arabia; and Tigrña is a descendant of the Semitic Geez. Amharic is another Semitic language, although it has diverged widely from the ancient type. Compared with Tigrña, which is a provincial idiom, Amharic is the national speech of Abyssinia; it is spoken at court and by the chiefs, and on all the highways and by-ways by merchants, pedestrians, and tourists. It is, moreover, the literary language; it possesses an alphabet of 251 letters, and some hundreds of books, which are, however, worthless theological works.

The Abyssinians present no national type; various casts of features are seen among them, and all shades of complexion from bronze to deep black; but even the blackest are distinguished by a certain nobility of countenance, which doubtless was inherited from the early brown invaders and from the Arabs. In ancient times the Abyssinians probably embraced Judaism. They have professed a rude form of Christianity since the fourth century, and they have recently imposed this Christianity upon their Mussulman fellow-countrymen. Before this forced conversion, the Mohammedans were distinguished by a blue silk cord² worn around the neck. The Abyssinians listen to the sing-song service of bearded priests in big white turbans, and of monks in yellow caps; they observe fasts during 192 days every year, and they buy absolution by slipping a little money into the hands of the church officials. This is their Christianity. Their great patriarch is entitled Abuna, "our father." The Falashas, or Abyssinian Jews, variously estimated at 50,000, 100,000, or 250,000, according as the entire Abyssinian people is reckoned at 1½ million, 2 million, or 3½ million, claim to be descended from Jews who brought the law of Moses to the inhabitants of the Plateau long before the Christian era; but, in all probability, they belong to aboriginal tribes, and are brothers of the Agaws.

Nearly all the Itiopyavan dwell in the uplands; very few descend into the Kollas.

¹ The *abasambo* resembles both the leopard and the lion.

² The *mateb*.

Divisions and Cities.—The Abyssinian empire is subject to a Negus Negesti, or “king of kings.” Or, rather, the most powerful man of the country, whether he be from Tigré, Amhara, or Shoa, spends all his life struggling to impose his suzerainty on the chaos of seignioralties, principalities, and districts which are disputed by warriors of the old stock or by parvenu *routiers*.

Axum (pop. 5000), the “city of Abraham,” in Tigré, 7382 feet above sea-level, was the capital of Abyssinia before the conversion of the people to Christianity; it is now their holy city, and, owing to the remoteness of Jerusalem, which the Itiopyavan consider the most sacred spot in the world, the priests come here on pilgrimages from the north, from the south, from the Voïna, from the Degas, and even from the Kollas; small as it is, it is overrun with priests. Adowa (pop. 3000), twelve miles to the eastward, at an elevation of 6398 feet, is the capital of Tigré.

Gondar, the religious capital, is situated at an altitude of 6725 feet, near Lake Tsana, in a very equable climate. It contains 5000 inhabitants; when it was the residence of the emperors, it had a population of 40,000, and, it is said, even of 60,000 to 80,000. The Portuguese, who ruled here at one time, have left the impress of the Lusitanian features, and also a few monuments, walls, towers, and churches, which give the town the aspect of a European town of the Middle Ages.

The Negus resides at an elevation of more than 8500 feet, at Debra Tabor, a mountain fortress, not far from the water-shed between the Abai and the Takazza, at the foot of the huge *massif* of Guna (13,881 feet). Debra Tabor signifies Mount Tabor; and the palace of the Negus is close by a very ancient pilgrimage church of the Abyssinian Christians.

In Shoa, a country which is in fact almost independent, but pays a tribute to the Negus of Abyssinia, the capital, Licheh has a charming climate; the most elevated town (9186) feet is Angolalla; the religious metropolis and the most populous city is Ankobar (pop. 7000). The same form of Christianity prevails in Shoa as among the Abyssinians, and Amharic is spoken more widely than any other language.



AN ETHIOPIAN GIRL.

The Galla.—Abyssinia is bordered on half its perimeter by Egyptians, who have tried to conquer it, but have been repelled. On the south, Shoa unites it to the Galla Country, from which the Juba, one of the large streams of the eastern coast of Africa, descends. This current gathers the waters of more than 231,000 square miles, and empties them, impregnated with clay and sand, into the Indian Ocean, nearly under the equator.

The Galla have been making inroads into Shoa for a long time. They are more numerous and stronger than the Shoans, and, possibly, than the entire Abyssinian people, but they are so split up into clans that they are powerless against nations weaker than themselves; they are, nevertheless, terrible warriors, sheltered behind their shields of thick skin, and armed with a lance or two-edged sword. In their zeal for the vendetta, their delight in bloodshed, in the cruelty practised toward foes, and in the incessant warfare between tribes, they resemble the Albanians. They are Negroids, not black, but of a very dark brown hue, and resembling the Abyssinians, with whom they evidently have common ancestors. Their language, which has Semitic affinities, is not wholly unlike the Basque in general character, in syntax, and even in its vocabulary. This tongue, which is broken up into numerous dialects, is their only bond of unity; in every other respect they are divided. Many of them call themselves Christians, others profess the faith of the Prophet; but the great multitude have remained pagans. Here they are ruled by kings or military chiefs, elsewhere they are subject to a nobility; and there are tribes and confederations among them organized on the basis of a republic.

The Galla shepherds and warriors inhabit vast districts stretching from the Abyssinian citadel nearly to the equator. In the north their influence has extended far beyond Kaffa,¹ Enarea, and other countries where they border the Shoans and the Abyssinian people. For centuries and centuries they have supplied so many children and young girls, of hostile tribes or of their own blood, to slave-merchants from the Arabic Orient, that they have in large measure transformed the Nubian, Egyptian, and Arabian nations. If we knew the origin of the Galla, we could doubtless trace many relationships which will always remain a mystery. The nations of western Africa, those of the Central Plateau (even in the west and south), and perhaps also those of ancient Egypt, would have fewer secrets for us. But the Galla, like so many other peoples, did not appear on the stage of history until after their wars, migrations, and fusions of race and language had been totally forgotten. Man learned too late the art of writing.

Obok, Assab, Massowah.—The Hawash, or Hawasi, which separates the Shoans from the Galla, receives the waters from Ankobar. It descends impetuously, at times suddenly swollen by great freshets, into the thirsty coast-region of Samhar, which, apparently, ought to transmit it to the Red Sea or to the Gulf of Aden. But the stream shrinks on the way, and terminates its course of 500 miles in the swampy lagoon of Aussa, or Bada; this sheet of fresh water dwindles away in the dry season, and spreads out for a long distance over the surrounding marshes during the floods.

Lake Aussa is not far from the Assal, and the Assal is only 12 miles distant from the Bay of Tajura; this last body of water is controlled by the French, who own, along the dry, burning, and desolate coast, the ports of Sagalo, Tajura, and Obok. The French have also recently come into possession of the territory of two large Somali tribes, the Ghibril-Abokor and the Gadi-Bursi, who live on the coast to the

¹ The native country of the coffee-plant.

south and south-east of the bay, on the route to Berbera and Cape Guardafui. The protectorate of this country has widely extended the French sub-Abyssinian domain, but it has given them nothing but forbidding shores, treeless, waterless ravines, naked mountains, and a fiery clime. The colony will be useless to France unless she enters Shoa from it, either along the Hawash or by some other path. The most convenient route between the sea and the Shoan plateau is that running from the Bay of Tajura, which sets into the land for about 40 miles, but caravans choose another track; they descend from Ankobar to Zeila by way of the charming Harar oasis, where there is a town of 20,000 souls, at an altitude of 5,578 feet.

Zeila belongs to England, and Obok to France; Assab is a dependency of Italy, and vast tracts, including Abyssinia and Shoa, have been declared by treaties under Italian influence. The Italians have a garrison in Massowah, from which station they are keeping an eye on eastern Soudan. Italy, France, and England are backed here, from the sea to the base of the mountains, by an excessively hot country,¹ which is occupied by two kindred peoples, the Afar or Danakil, and the Somali. There is good reason to believe that both these nations are derived from the inter-marriage of Arabs and Galla. They bear evidence of this mixture in features and physique; though nearly all of them still speak their old Hamitic tongue, many of them understand Arabic; many, also, are Mussulmans, nominally or in truth, while the rest have remained pagans.

TRIPOLI.

Tripoli embraces 500,000 square miles, but does not contain over 1,300,000 inhabitants. It is composed of *hammadas*, waterless sands, and a narrow coast strip on the Mediterranean. This is the least favored region of North Africa. The desert encroaches upon the habitable zone to such an extent that in certain places the Sahara even pushes its dunes out into the sea.

Barca, or Cyrenaica.—A limestone boss, forming the plateau of Akabah, emerges from the Libyan Desert on the shore west of the Nile delta; it is from 650 to 850 feet in elevation, and belongs to Egypt. In its western prolongation this rocky table-land increases in altitude and then passes into Tripolitan territory under the name of the Plateau of Barca. The Plateau of Barca covers, perhaps, between 58,000 and 62,000 square miles, and contains a population of 300,000; but the Red Barca, which constitutes the fertile portion, embraces scarcely 10,000 square miles; the remainder is called the White Barca. The Arabic-speaking people apply the term Red Barca (Barca el-Homra) to the limestone plateaus covered with red soil, and to the red gorges leading from the uplands to the sea-shore; the term White Barca (Barca el-Beida) they have bestowed upon the southern slope of the plateau, which consists of whitish earth and sands, and whose river-beds incline toward the Libyan waste. Red Barca, now almost uninhabited, possesses such charming glens, such a healthful climate, and such abundant springs, that it might become a living country again. Ruins and labyrinths of sepulchral grottos testify to Cyrenaica's former opulence,—

¹ Possibly the most torrid in the world.

for this country, now the most desolate outside of the Sahara, this kingdom of the dead, was the Cyrenaica of the Greeks.

Cyrenaica derived its name from the resplendent city of Cyrene, founded by Dorians from the island of Thera (Santorini). Later it was called Pentapolis, from its five cities, — Cyrene, Teucheira, Hesperus, Apollonia, and Barca (from which the present name of the country is taken). To-day the land which Pindar named the "Grove of Jupiter and Venus" is ruled by a people, 300,000 in number, of more or less nomadic habits, ignorant of arts and of letters, and speaking nothing but Arabic. Bengazi, the principal town, in reality a miserable village, is situated near the ruins of Berenice, on the Gulf of Sidra.

Tripoli Proper. — Like the plateau of Barca, Tripoli proper, or Mesrata, lies on the Gulf of Sidra, a very broad bay, the desolate shores of which are swept by winds from the north-east, north-west, and north, and from the torrid south. Behind the seaboard, which is pressed upon by almost Saharan sands, rise the scarped and rugged Nekus and Gharians, with elevations of 2450 to 3300 feet. Beyond this chain, with its rocky cirques, its grottos, valleys, and springs, the Hammada el-Homra (Red Plateau), of which the Nekus and Gharians form the northern rim, partakes of the character of the Sahara.

Tripoli proper is supposed to have a population of eight or ten hundred thousand. Even including the freshest valleys of Barca, the regions around the Gulf of Sidra are incapable of producing a dominating people; a small nation, distributed along the coast, is all that can ever be looked for there. Tripoli is, as it were, afloat between two powerful magnets, Egypt and the Tell. Apparently, it will drop in the direction of Algeria, for the Sidra districts, in the north, are a desiccated Tell and not an Egypt; and on the south the plateaus and dunes adapt themselves to the hammadas and the aregs of the French Sahara.

The Tripolitans speak little except Arabic, but there are tribes and fractions of tribes among them that still remember their Berber origin. As the country is directly subject to the Turkish Grand Sultan, with no intermediate viceroy, and with no foreign protectorate, a few thousand Osmanlis are found among the inhabitants. There are also some thousands of Jews, in the cities, carrying on commerce and lending money at usurious rates, but not engaging in any other business.

Tripoli, the capital, a city of 30,000 souls, a Mediterranean port, carries on trade with Soudan by the oases of Fezzan or by Ghadames.

Fezzan. — **Tibesti, or Tu.** — A stony, sandy road, glowing white in the sunlight, leads from Tripoli to Fezzan, — an assemblage of oases, dunes, saline depressions, natron lakes, and the volcanic rocks of the White Haruj or the Black Haruj. Fezzan contains about 45,000 inhabitants, of mixed origin; they descend from Arabic, Berber, and Black stock; the latter forms a large element, for the shortest route from the Mediterranean to central Africa lies through these oases, and this intra-Saharan archipelago has had intercourse from time immemorial with Soudan, from which it still receives large numbers of slaves. Everybody understands Arabic, but the greater proportion of the people prefer Kanuri; this latter language is spoken by the Negroes of Bornu, the powerful Soudanese state nearest Fezzan, and the one which has contributed most to the formation of its mixed race.

The chief city of Fezzan, Murzuk, is an unhealthful little town of 3500 souls, — or 3500, including all the gardens of its oasis. It is 1800 feet above sea-level, about as far from the Mediterranean as Algiers is from Gibraltar, and as far from Lake Chad as



TRIPOLI.

Algiers is from Morocco. The route leading to this lake, or, more strictly, to this lagoon, leaves on the left the Saharan country of Tibesti, or Tu, whose inhabitants, called Tedas, Tebus, or Tibbus, number about 12,000.

However insignificant Fezzan may be, it gives to Tripoli whatever importance the latter possesses, by connecting it with Soudan.

Ghadames. — **Awdjila.** — **Kufarah.** — The oasis of Ghadames, north-west of Fezzan, 300 miles south-west of Tripoli, and at nearly the same distance from Biskara, in a south-easterly direction, is an entrepôt of the Desert. Its ancient name was *Cydamus*. It is 1150 feet above the ocean, and contains 24,000 palm-trees. The 7000 inhabitants, who are of Berber stock, make use of a Berber dialect, and also of Arabic.

Awdjila, north-east of Fezzan, and not far from the most inland point of the Gulf of Sidra, has 200,000 date-trees; it occupies one of the hollows of the "Libyan Depression," 170 feet below sea-level. The Awdjilians are of Berber extraction, and have retained their old language, but they all understand Arabic.

The oasis of Kufarah, recently explored, and said to be "incomparable," lies south of Awdjila, separated from it by a stony plateau, and from Fezzan by a chaos of dunes; this is the best watered of all of the oases, and possesses the greatest number of date-trees. It is very loosely attached to the Pashalic of Tripoli, which is 840 miles distant, across semi-sterile or completely arid regions. The five sub-oases of which it is composed embrace together nearly 7000 square miles. The altitude is from 820 to 1300 feet. Kufarah formerly belonged to sedentary Tibbus, but for the last 150 years certain nomads have ruled it; the latter, who are fanatical Mussulmans, are Berbers mixed with Arabs and Blacks.

BARBARY.

The Moghreb, or the Occident. — Between the Mediterranean, on the east and north, the Atlantic, on the west, and the Sahara, on the south, rises the plateau of Barbary, an isolated tract which the eastern Arabs called the island of the Moghreb,¹ or of the Occident. It comprises two political divisions, of nearly equal area, namely, Algeria, on the east, and Morocco, on the west, the latter independent, the former subject to France. By nature the Moghreb is one and indivisible. Algeria and Morocco are both formed by the enormous wrinkle in the earth's crust called the Atlas Mountains, a name which is perhaps a slight corruption of the Berber word Adrar ("uplands"). The two countries resemble each other in every respect, having the same climate and the same vegetable productions, which are those of Mediterranean Europe. Both sections are divided into a Tell, or cultivable land, Steppes, or extensive pasture-lands, with fruitful tracts near the springs, and a Sahara studded with oases. Exact figures cannot be given (it is often impossible to distinguish the moor from the cultivable soil), but it is estimated that the Tell embraces about 143,000 square miles, and the Steppe about 89,000. As for the Sahara, its 400,000 square miles and over are worthless except in the oases. The Steppe and Tell together cover about 232,000.

¹ Or Maghreb, or, rather, Mghrb.

The useful animals of Barbary are the ox, the graceful, swift, fiery, affectionate horse, the sheep, the camel, the gazelle, and the ostrich; the wild beasts include the lion, the panther, the hyena, and the jackal. The country is infested with locusts, which arrive from the south, by billions. When these flying squadrons, which turn day into the darkest night, fall upon a plain, they devour it to the last leaf.

The same races of men are found everywhere, from the Gulf of Sidra to the Atlantic, namely, Berbers who have been fixed here from remote antiquity, Arabs,



BERBER AGRICULTURISTS.—A DUAR.

who entered the island of the Moghreb as conquerors and converters, Arabicizing Berbers, Berberizing Arabs, Arab and Berber cross-breeds of every degree of mixture, Moors, Kolugis, who are descended from Turkish soldiers¹ and native women, Jews, and, finally, the latest comers, French, Catalans, Spaniards, Italians, Maltese, etc.

Berbers and Arabs.—General Faidherbe,² who had a very thorough acquaintance with all the North African races, estimated the entire population of Barbary, in its broadest sense,—including all that portion of the Sahara which is inhabited by Berbers,—at 12 million souls. He also placed the black element in these 12 millions at $\frac{1}{10}$, the Arabic at $\frac{1}{10}$, and the Berber at $\frac{1}{10}$. In his opinion, the Berber is a cross

¹ Or, rather, soldiers bearing the name of Turks; the Turkish army was recruited from all sorts of Mussulman elements, from Osmanlis, Albanians, Bosniaks, Circassians, Kurds, Greeks, etc.

² See *Instructions sur l'Anthropologie de l'Algérie*, by General Faidherbe and Dr. P. Topinard.

between the Libyan natives and the fair-haired invaders who entered the country in ancient times from Europe by way of Gaul and Iberia. As for the Arabs of these plateaus, mountains, and plains, they are not descended from the heroes of the Great Conquest; the soldiers of the *djehad* swept like a hurricane across North Africa. The sun which gleamed out on the old mountains of the Atlas chain after the last flashes of this storm saw not a single Arab tribe, not a single Arab *duar*; the Adrar masses were still Berber. And they remained such for 400 years. Suddenly, about the middle of the eleventh century, there arrived from the east, sent hither by an Egyptian Caliph, who desired death rather than victory for them, six great tribes of plunderers, namely, the Solaim, and five tribes of the family of Hilal; from the latter is derived the name Hilalian invasion, often bestowed upon this movement, which launched 250,000 Arabs (some say a million) from Egypt into Barbary. The condottieri of these second invaders gradually drove the Berbers back into the rugged highlands; they took possession of the plain, the steppe, and the parts of the desert where grass springs up after a rain, and, in the course of time, they became the Arab people which we find in the Moghreb to-day.¹ These Arabs, however, have been much mixed with Berbers, and, to a certain extent, with Blacks, as the Berbers themselves are somewhat tinged with negro blood, and deeply penetrated by Arabic.

Spain, Portugal, and France in North Africa. — The Arabs are everywhere on the decline in Barbary, while the Berber race is growing, and while a new nation is being formed which is plainly destined to rule the African Tell. France is the mother of this nation. There was nothing to attract France into these regions, neither proximity, alliances, commerce, tradition, nor a desire to spread the Christian faith among the Mussulmans, who despise it. Beyond all this, the climate of Barbary is un congenial to the larger half of the French people.

Italy was too much shattered to attempt to seize Africa, but Spain, on the contrary, was even violently urged by circumstances toward the coasts of Morocco; the course of her history, the hereditary hate engendered by 800 years of warfare against the Moors, the necessity of protecting her shores from the ravages of Barbary pirates, the maintenance of her power, the security of her marine, and, above all, her enthusiasm for the propagation of the Catholic belief, all conspired to push Spain across the Mediterranean. After having driven the "Arabs" from the Asturian valleys to the Douro, from the Douro to the central sierras, from the central sierras to the Tagus, from the Tagus to the Guadalquivir, and then finally from this yellow stream to the azure sea, Spain still thirsted for vengeance. She crossed the sea, and struggled passionately to plant her glorious banner on the impious shores. Every Christian whose blood was shed on the heretical soil was counted among his compatriots as a martyr.

¹ The point so strenuously insisted upon here and elsewhere (pp. 177-178, 292, 437) by Reclus is, to say the least, an interesting one. Though it was during the first century of the Hegira that the Arabs conquered and Mussulmanized North Africa, the Berbers seem to have been dislodged from their seats at different periods, in different parts of the country. Those of the desert, for example, were forced out of their borders by a pre-Islamic Arab invasion. The tribes of Barbary proper may have retained their foothold until the middle of the 11th century, when the movement, or immigration, here denominated the Hilalian invasion is said to have taken place. For accounts bearing out the statements of Reclus, see Leo Africanus (*Descript. Africæ*) and Marmol (*Descrip. de l'Afrique*, 1667), though Leo the African distinctly states that the "50,000 men-in-arms, beside their women and children," who entered Africa at that time were from Arabia Deserta and Arabia Felix. See, also, Ibn Khaldûn, *Histoire des Berbères* (translated by Baron de Slane), Dr. Shaw's *Travels in Barbary*, and *Les Epoques Militaires de la Grande Kabylie*, by A. Berbrugger. For the commonly received views in regard to the peopling of North Africa by the Arabs, see Gibbon, Chapter LI.; instructive notes on some of the writers named above will be found in the same chapter. — Ed.

In 1509, Cardinal Ximenes debarked before Oran. Holding in one hand a crucifix, and pointing with the other toward the south, he cried: "It is not a city that you are about to take; it is all Mauretania which you are to conquer with the Cross." Later,



AN ARAB.

powerful fleets landed armies at Algiers (which was attacked seven times), at Bugia, at Tunis, and again at Oran, but nearly all of Spain's expeditions were failures; the sea was hostile to her fleets, the Moors triumphed over her armies, or, when she had the good-fortune to conquer, she was unable to profit by her victory. At length, in

1792, the Spaniards abandoned Oran, their last stronghold in Africa outside of the *presidios* of the Moroccan littoral.

The Portuguese were no more fortunate. They did not long retain their hold on Mers al-Kebir, nor on Tangier. Their great expedition against the Moghrebins ended disastrously at Al-kasr al-Kebir, and this defeat was the death-blow to Lusitanian power in North Africa; and yet these forces arrived in a thousand vessels, and with the expectation of driving the Infidels to the ends of the earth. Later, the Portuguese were compelled to surrender Ceuta to Spain, then to abandon El-Araish and the fortresses which they had built on the Moroccan coast, with stones hewn in advance in Lisbon. It was France that seconded destiny. She triumphed from the outset. The French domain in Africa stretches to-day along 1250 miles of coast; it extends south across Tell and Plateau, and embraces that part of the Sahara where the best dates are produced.

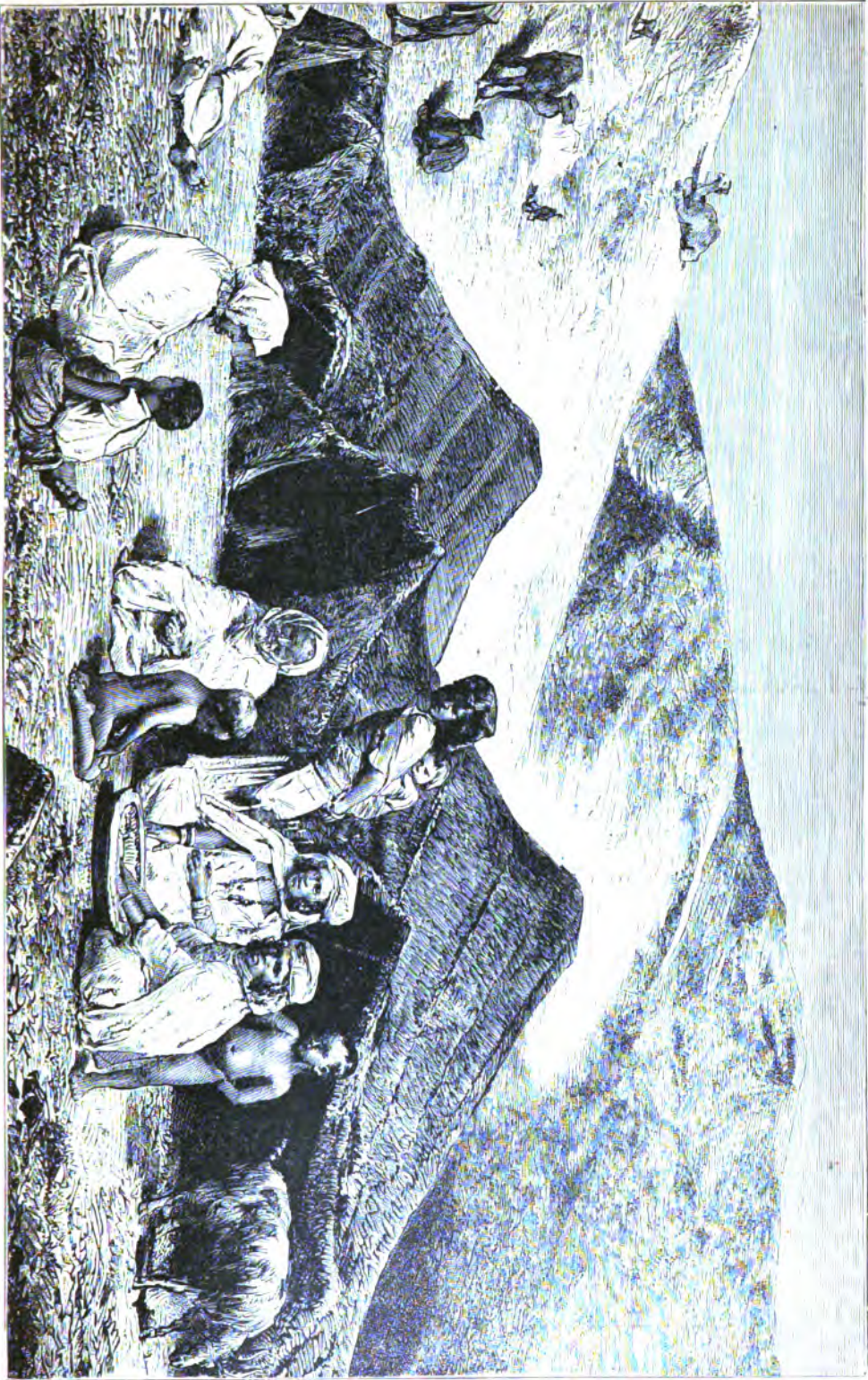
The limits of Barbary are undefined on the south; on an area of 232,000 square miles, there are hardly 8 to 10 million inhabitants, 5½ million of whom are Algerians.

ALGERIA.

Size of Algeria. — We drop here the term Algeria-Tunis, which we have hitherto applied to the French possessions in North Africa, for why sunder what nature and history unite? It would be no less puerile to fix the boundaries of Algeria on the south at the ideal line of El-Golea, in the very direction where, as there are no obstacles in the way, this great country must inevitably reach its natural frontiers. France is ascending here along the sterile Wady Mya and the more sterile Igharghar to the water-parting between these dead torrents and the dead rivers inclined toward the Niger. Within these limits, Algeria embraces over 400,000 square miles (twice the area of France), and it includes the larger half of the Barbary territory. The smaller half, Morocco, on the west, comprises more of the Tell; it is better watered, and more of its surface is in lofty mountains, while Algeria spreads out in vaster plateaus.

Coasts. — Algeria has the Mediterranean on the east and north, the Atlantic, prospectively, on the west, and the Sahara on the south. Between sea and desert stretch mountains and fissured table-lands, all beneath a burning sun, and forever swept by two winds,—in the north, the moist, life-giving breeze from the Mediterranean, in the south, the fiery breath of sterility and death from the Sahara. Nearly everywhere there is a distance of 150, 200, or 250 miles between the two laboratories of these winds. In the south of Tunis, the Sahara skirts the sea in the vicinity of Cabes, near salt lakes, at the base of the mountains of the Urghamma. It is here on the shores of the Gulf of Cabes, at points where the Mediterranean raises its highest tides,¹ that engineers have proposed to cut through the rocks and sands and pour the sea into inframarine saline marshes and depressions, which doubtless were once occupied by a lake of the ancient Wady Igharghar. It is hoped that in this way humidity

¹ As high as ten feet in the bays of Jerba, a Tunisian island of 250 square miles, inhabited by 40,000 Berbers.



AN ARAB ENCAMPMENT.

and freshness may be restored to the environs of this torrid vat; but the project is too serious an offence against the decrees of nature for nature not to doom the work, in case it is ever attempted.

North of Cabes, the coast gradually loses its desert character, and becomes at length the fertile though stony Sahel,¹ exuberantly productive in oils, and abounding in towns and villages, built in the midst of olive-groves. The shore continues to the north through Sfax, Mahadia, Monastir, Susa, and Hammamet, curving in broad, shallow, false bays. Hammamet is situated at the root of the peninsula of Cape Bon, one of the few long tentacles of this coast, a mountainous, sunlit point of land, with springs and flowery ravines. Cape Bon, forms the eastern shore of the bay of Tunis and Carthage. The city of Tunis, on a shallow salt lake, communicating with the sea by the Goletta, has given its name to the 50,000 square miles, more or less, of territory of which Tunis was composed when it was informally annexed to France.² Carthage, dead and yet immortal, is nothing more than a heap of rubbish, mere lineaments that can be inferred rather than viewed on or under the soil; this mother of Hannibal played for the world with Rome; she lost. Rome might have lost; a pebble sometimes deflects a current from its path; a trifling chance sometimes alters the course of history.

At Cape Farina, which protects the inlet of Porto Farina (once an excellent harbor, but now obstructed by the alluvia with which the waters of the Medjerda are gorged), the coast turns westerly, keeping this direction as far as the Moroccan frontier, except that beyond Philippeville, or beyond Algiers, and more decidedly still beyond Tenes, there is a slight slope at the same time toward the south. Here we encounter, first, Bizerta, a port which will form in the future an important station between the Nile and Gibraltar; the Tinga, the salt lake on which the town is built, can harbor all the vessels of the world at once on its 50 square miles. It is connected to the sea by a channel which will have to be deepened and broadened, for at present it is a mere ditch, just deep enough to admit transports. It communicates by means of a short, sinuous, lazy, boggy river with an interior lake, almost as large as itself and scarcely 8 feet deep, called the lake of Gebel Ishkel; the waters of this latter sheet are fresh when the rivers pour the periodical rains into it, and brackish when it is so lowered by evaporation that the Tinga sets back into it. A little beyond Bizerta, Cape Blanco, from which the outlines of Sardinia are dimly discerned, is the most northern point of Africa, in latitude 37° 20'.

Then follow: the island of Tabarca, at the base of the *massif* of the Kroumirs, a tribe of Arabs or Berbers, whose existence has been questioned;³ La Calle, a fishing-station with coral reefs; the charming city of Bône, which dreams of a mighty

¹ The Arabic for littoral.

² Tunis was formerly a tributary province of the Ottoman Empire; but in accordance with a convention signed by the Bey at the point of the bayonet, in July, 1882, France now administers the country and collects the taxes in the name of the Bey. The latter is granted a civil list of \$140,000, and the generous sum of \$250,000.—ED.

³ Mr. Edgar Barclay, in his interesting work on *Mountain Life in Algeria*, makes the following extracts from a letter published in the "Daily News" of June 7, 1881, and written by a correspondent in the French camp: "I have always made it my business to inquire about the Kroumirs. Here, as elsewhere, I find the same story. Few people have ever seen one." . . . "So certain is every one that no further fighting can possibly occur, and that any attempt to find the Kroumirs is abandoned, that I leave for Tunis to-morrow, marvelling much at a campaign that has had no beginning, no middle, no ending, and that has taken 40,000 troops away from their homes to invade the country of an enemy who has been invisible." Mr. Barclay adds that the "Kroumirs (if they really exist) are Berbers."—ED.

destiny; Philippeville, a wholly artificial harbor, the entrepôt of commerce between France and Constantine; Collo, which is dominated by wooded summits; Jijelli also near cool, forest-clad djebels; Bugia, in an imposing cirque, between Kabyle mountains that wear a tiara of snow in winter; Dellis, equally Kabyle, — that is, Berber; graceful Algiers, rising in the form of an amphitheatre along the slope of a steep hill;



A BERBER WOMAN.

Shershel, a village which, under the name of *Julia Cæsarea*, was in ancient days the capital of one of the Mauretanas; Tenes, on a vicious sea; Mostaganem, on a still worse sea; then the three Oranian ports, — Arzew, a fine natural haven; Oran, a precarious work of man's hand; and Mers-al-Kebir, worthy of its Arabic appellation, which signifies the "great port." Beyond Nemours, where the Spanish *balancelles*

put in, we reach the boundaries of Morocco. Algeria extends through about 13 degrees of longitude, from 9° E. to more than 4° W., and from 33° 20' north latitude to 37° 20'.

Coast Mountains.—Nearly everywhere the Algerian shore rises abruptly from the sea in djebels, gloomy or gay, according to the nature of the rock and the poverty or richness of their attire; they are generally severe. Among these maritime masses, which are dismembered sections of the Atlas range, is Zāghouan (4462 feet), which gave its name to ancient *Zeugitana*; from the caverns in its chalk flows the 13 cubic feet of water per second which supplied Carthage in olden times, and which quenches the thirst of Tunis to-day. The mountains of the Kroumirs, almost unviolated down to 1881, lift their heads 4593 feet and more, between the sea and the Wady Medjerla. Their meadows, forests, deep ravines, abundant springs, and short torrents flowing over stony beds make them an Arcadia, or, not to leave Africa for a parallel, a Kabylia. Edough (3294 feet), black with woods, faces the bay of Bône, and sinks into the Mediterranean along a wild coast. Goufi (3576 feet) overlooks Cqollo; it branches out in rugged headlands, at the "Seven Capes," which separate the Gulf of Philippeville, on the east, from that of Bugia, on the west; living water descends into a thousand glens from its wooded flanks. Bahor (6493 feet), almost twice the height of Goufi, snow-crowned in winter, darts its peaks into the air between the verdant shore, with its running streams, and the plateau of Setif, which is like a fulvid, dry, and dusty Castile. It looks down grandly on the Gulf of Bugia, one of the most beautiful of the Mediterranean harbors. Although its mountaineers, of Berber stock, have discarded their Kabyle dialect for a corrupt Arabic, the country is called Little Kabylia, in distinction from the Great Kabylia of the Jurjura, which fronts it across the valley of Bugia's stream.

The Jurjura range (7585 feet) has all the air of a great sierra. Its rocks are imposing, it is cut by lofty cols, and it is inhabited by valiant tribes dwelling in hamlets daringly perched at giddy heights. The littoral portion of the range consists of a low chain of 4193 feet; the principal mass rises back of this advance bastion, south of the Sebaou River, but, owing to its superior elevation, it attracts and condenses the sea-vapors, and is essentially maritime on the northern slope, which is as humid as any in Algeria; the southern slope is drier.

In the Sahel of Algiers, which is rent by picturesque gorges, a few small Alhambras are to be seen,—the old palaces of the pirates,—besides an ever-increasing number of villas, and fine young orchards and vineyards. The Sahel is too low to arrest the clouds, and they pass on to the mountains of Blidah, across the fat plain of Metidja; we may therefore regard these latter mountains as maritime, although they are separated from the sea by the Sahel and the Metidja. Between the highest two summits,—the peak of the Beni Salah (5345 feet), and Mount Muzaia (5263 feet),—the Chiffa flows through a famous gorge, which affords a path to fresh Medeah and to the incandescent south. The Chiffa, the Harrach, the Hamise, and numberless small streams water the Metidja copiously; this valuable alluvial tract, embracing 800 square miles, proved a charnel-house for the early European settlers, but it has now become a garden of life.

Chenoua (3176 feet), forming a stately boundary to the Metidja on the north-west, casts its shadow from a distance on Shershel, which was the capital of an important province when Algiers was scarcely a good-sized fishing-hamlet. Under the Romans, North Africa comprised, from east to west: the Province, where the

revived city of Carthage flourished; Numidia, with bold Cirta; Mauretania Sitifensis, so called from Setif (Sitifis); Mauretania Cæsariensis, which was governed from Shershel (Cæsarea); and Mauretania Tingitana, or Mauretania of Tangier (Tingis), a vast country on the very confines of the globe, an impenetrable, unpenetrated district of the Atlas Mountains, which was little Latinized by its conquerors. Chenoua is united to the masses out of which Mount Zaccar (5184 feet) rises.

From Mount Zaccar are visible the rings of the Shellif, its immense plain, and jagged Ouaransénis; then, to the northward, beyond chaotic djebels, the hazy horizon of the Mediterranean. Between this stream and the sea stretches, as far as the embouchure of the Shellif, a coast sierra which, gradually sinking, and changing its name several times, drops below 3800 feet beyond Tenes, and becomes the Dahra. This mammillated tract is inhabited by a small people, in part Berber; the district is green on the north, toward the sea, and dry on the south, toward the river, but it is fertile everywhere. The Shellif empties into the Mediterranean not far from the gay city of Mostaganem; from the mouth westward to the Moroccan frontier, no mountain of 3800 feet guards the iron coast. The *massif* of Arzew has an elevation of 2070 feet; that of Oran is only 1916 feet high, but it looms above the Hispano-French town, grand, wild, and barren, with magnificent *castillos*¹ on the jutting rocks.

Mountains of the Interior.—Between the maritime djebels and those on the margin of the Sahara is a confused tangle of chains, domes, and peaks. Here are low plains and high plains furrowed by streams (of changing names), which are scant and turbid as soon as they reach the low regions, where the sun evaporates them, and where sand, shingle, and gravel absorb them; but in the uplands they are limpid and cool, and to the inhabitant of the Tell, as well as to the dweller in the Sahara, the murmur of the water rippling over the stones is one of the most touching harmonies of nature. Without the limits of the Kabylas, and outside of a few favored non-Kabyle mountains, the Algerian uplands exhibit nothing but burning, barren slopes, with here and there, at long intervals, black patches of thickets, stunted bushes, or the remnants of an old forest of pines, cedars, various resinous trees, arbor-vitæ, and oaks. Now, this region of scant and, unfortunately, irregular rains, menaced by the encroachments of the Sahara, needs woods to temper the heat of the skies, attract the clouds, evoke fountains, and rejuvenate the torrents. If suitable forests were to be planted on the bony djebels, even the most skeleton-like would take on new life.

The wooded eminences of Souk Harras and of Guelma, the wasted summits of the plateau of Constantine, the fulvid masses south of Setif and in the vicinity of Bordj-bou-Areridj (6109 feet), the Dira of Aumale (5938 feet), the mountains of Teniet el-Hâd (5919 feet), with cedars rivalling those of Lebanon, Ouaransénis, and the charming Mountains of Tlemsen, abounding in caves, copious springs, and running streams,—these and a hundred others among the djebels of the inland Atlas range deserve mention. The loftiest, Ouaransénis,² is also the most beautiful. It is drained by the Shellif. In the main, these mountains are ranged in lines parallel to the coast and to the maritime chain; they descend on the Sahara by gentle slopes or rugged cliffs—the broken remnants of a sierra which once protected the Tell more effectively against the Desert.

The Aures Mountains (7638 feet), which formed the corner boundary between Algeria and Tunis before the annexation of the latter, possess the loftiest peak within the present limits of the French Tello-Saharan Africa. This peak is, how-

¹ Forts built by the Spaniards.

² Called also Ouanséris and Ouanchérich.

ever, only a few feet higher than the culminating point of the Jurjura. The Aures send down a few brooks into the brackish lakes of the plateau of Constantine, and long and noisy perennial torrents to the Franco-Tunisian depression, into which they leap through frightful gorges. It is among these masses that the Medjerda, the second longest river in Algeria, has its most remote sources. The inhabitants are native tribes of Berber-speaking Berbers.

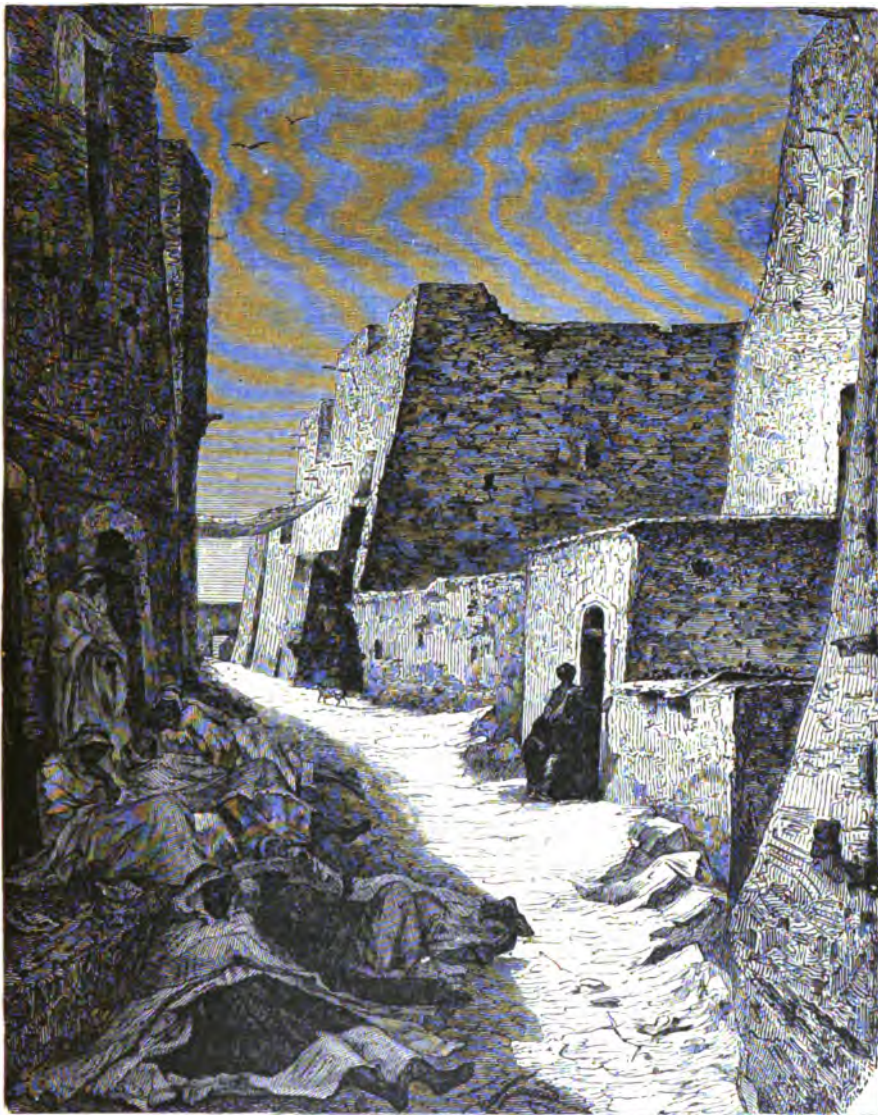
Djebel Amur (6355 feet) dominates Jelfa, Laghouat, and Aflu, and terminates at Geryville. It faces the naked summits beyond which the 30,000 Beni M'zab dwell in their seven cities. The Shellif, the longest river in Algeria, and also in North Africa, rises in a few insignificant springs in this chain. Djebel Amur is prolonged toward the west-south-west, — the normal direction of the Atlas ranges, — under the name of the Mountains of the Ksurs; then it enters Morocco, or, more correctly speaking, the district of Figig, not yet subject to Algeria, and no longer subject (if it ever was) to the grand sheriff of the Moroccans. On the very frontier rises Djebel M'zi (7218 feet), the culminating point of the province of Oran, as the Jurjura *massifs* contain that of the province of Algiers, and the Aures that of the province of Constantine.

Streams and Rivers. — Little can be said of the Algerian rivers, except that they are sometimes formed of small, clear torrents, and sometimes of fine springs, that they venture humbly into imposing defiles, that they abound in cataracts, and that they are destined to be confiscated for the irrigation of the valleys and plains.

The Medjerda issues from the wooded, rocky masses of Souk Harras; it is cradled amid Roman ruins, and Roman ruins bestrew its basin; it discharges its muddy waters into the Gulf of Tunis, after a sinuous course of 227 miles, or 270 from the most remote source of the Wady Mellegue. — The tortuous Seybouse (137 miles) flows through the Guelma valley, and terminates near Bône. — The Wady el-Kebir (152 miles) reaches the gorges of its lower course from its native plateaus by the Constantine cañon: there, under the name of the Rummel, it finds its way around the fantastic rock of warlike Cirta, a fabulously old city, which has been besieged eighty times since the beginnings of history; at four different points the gloomy waters glide under huge vaults, and then they leap out of the ravine by three cascades. — The Sahel (125 miles) originates in the Dira of Aumale, and empties into the Bay of Bugia, where it is called the Summam; its entire course lies between mountains, and the channel is a succession of constrictions and expansions; on the left bank the Jurjura range rises abruptly and proudly. — The Sebaou (68 miles) is the central river of Kabylia; it is formed by torrents from the northern slope of the Jurjura, and it flows the year round; during the freshets it is sometimes an immense flood. — The excessively tortuous eastern Isser (125 miles) seldom issues from its defiles; the most beautiful part of its course is in the gorges of Palestro. — The Mazafran separates the Sahel of Algiers from the sub-Sahel of Kolea: the waters are clear as crystal in the mountains of Medeah and Blidah, where it is known as the Chiffa, but they become so turbid in the Metidja as to merit finally the name of Mazafran ("saffron water").

The Shellif (404 miles) takes its rise in Djebel Amur, and moves northerly, over dusty, flaming plateaus. Beyond its confluence with the Nahr Ouas-sel, a branch having its sources in the vicinity of Tiaret, it enters the zone of rains at the base of the mountains of Boghar; then, curving gradually to the westward, it skirts on the right the djebels of Medeah, of Milianah, and of the Dahra, and on the left the mighty *massif* of Ouarsénia. The valley between these escarpments is terribly torrid and dry, but the brooks from the mountains will be utilized at some future day

to irrigate it; they are amply sufficient for the purpose. The river is turbid, and flows between earth banks; its scant waters are stored in a reservoir above Orléansville, the only city as yet traversed by it. The chief affluent, the Mina (125 miles), which



THE STREET OF BAB-EL-GHARBI AT LAGHOVAT.

is swollen by the lovely Wady el-Abd, makes a leap of 141 feet in its upper valley, in the beautiful Fall of Hurara.

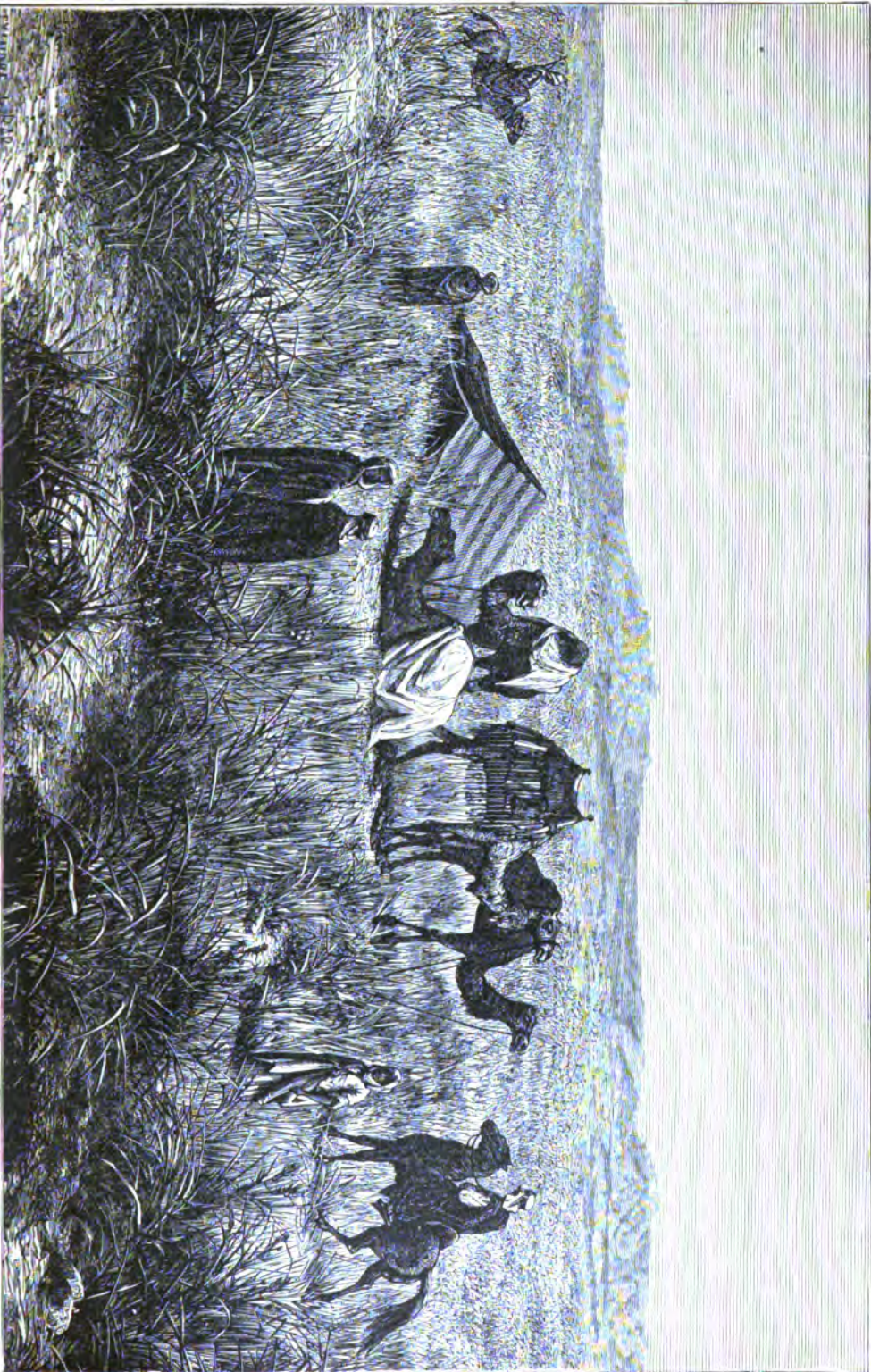
The Macta, a very short current, is formed by the junction of two streams, of nearly equal length, namely, the Habra and the Zig. The Habra (146 miles) unites the waters of a fan-shaped cluster of rivers rising in the Zaida and Mascara districts:

owing to the nature of the soil, and the favorable disposition of the rocks, a large part of the province of Oran (so much decried for its dryness) is supplied with some of the strongest springs of Algeria. A cyclopean dike sets back the Habra, thus forming a lake of about 495 million cubic feet, for the irrigation of the broad plains of Perrégaux. The Zig (134 miles), also stored in reservoirs, bathes Sidi-bel-Abbès and Saint-Denis. — The Tafna (90 miles) resembles the upper Habra in the beauty of its fountains, which are drawn from the caves of the Mountains of Tlemsen; not far from the famous town of Tlemsen, which was once an imperial capital, but which is to-day a mere shadow, one of the torrents of the basin, the Mefruch, is dispersed in graceful little cascades, at the Falls of El-Ourit, — together, 1600 feet high.

Steppes. — Sahara. — The Tell, or cultivable land, rises from the coast of the Mediterranean to the sources of the rivers inclined toward this sea. But behind the crest where their springs bubble up, scarcely any rain falls, the trees disappear, and vast expanses of grass that can weather the droughts stretch as far as the horizon, along dry river-beds, and around shotts and sebkhas, — that is, around saline lakes, if it is not a profanation of the name *lake* to designate thus fields of salt and of hot, hard mud; the mirage often causes these tracts to present the appearance of water, but it is only an optical illusion, and the traveller may perish of thirst on the shores of these false Lemans. The Steppes or High Plateaus, with their seas of alfa grass, succeed one another with monotonous grandeur. It is a mistake to attempt to trace an inflexible boundary line between Tell and Steppe; some of the peaks of the high plateaus, owing to their altitude and rocky texture, abound in fountains, and are far more productive than many a calcined summit and many a scorched, burnt plain of the Tell. The *campos* at the base of the Aures Mountains, with no drainage toward the sea, are Tell rather than Steppe; so also is the vast basin which sends the waters of its springs and its freshet floods to the Hodna (290 sq. m.), a lake with no outlet, around which it is possible to create a Metidja, by damming up the torrents; the same is true of the shores of the Eastern Zahrez (193 sq. m.), of the Western Zahrez (124 sq. m.), and the Jelfa district, one of the best wooded and most prolific in springs in all Algeria. It is in the west, in the province of Oran, on the Great Eastern Shott (637 sq. m.), and on the Shott of the Hameian (212 sq. m.), that the separation between the Steppe and the Tell is most clearly marked, and it is there also that the tracts of alfa grass are most frequent and most extensive. We hesitate to class the High Plateau among hopelessly doomed lands, when we forecast what it may become by the planting of woods, boring of wells, the damming of the brooks on every hill-slope, and by the cultivation of the vine. We would rank it rather as a Tell of inferior value, with a more healthful though less equable climate.

As for the Sahara, it seems destined to remain a Sahara forever, or until such time as an upheaval of the order of nature shall reverse the course of the land and sea breezes. At the utmost, nothing more can be done than to create oases in the hollows, and to plant here and there in the clay, the dune, or the rock, the few trees that can resist drought, morning chill, and midday heat. Its water lines are, nevertheless, of incalculable importance. It is by them that the French expect to enter Soudan, either along the Igharghar, or by the oasis chain of the Wady Rir, the Wargla depression, and the Wady Mya, or still again, and more safely, by the valley of the Wady Gir.

The Berbers. — The Arab accuses the Frenchman of having trodden him under foot for over sixty years, and of obliterating his works and his name. The Berber



AN ALFA SEA IN ALGERIA.

cries out to the Arab, "After 647 you passed, fire-brand in hand, over my garden of North Africa shaded by the forest of Cables and Tangier; since 1050, you have plundered and mobbed me; you have imposed upon me your God, who is not clement and pitiful except on your lips and in your litanies and formulas; you have robbed one-half of my tribes of their language, and have corrupted that of the other half!" No one rises to bear witness against the Berber. Yet he too has eaten flesh and drunk blood; his race, like the others, is constituted from peoples which clashed with one another, and were shattered, but which, with the long lapse of time, became harmonized, so that out of bloodshed and violence and treason sprang a Numidian language, a Numidian soul, and a Numidian conscience, which neither Carthaginian nor Roman could destroy, and which the Arab has merely weakened, or here and there disguised.

Whites, blacks, and browns, the unknown of the dim, prehistoric age, the Carthaginian, who displayed the insolence, the cruelty, and the rapacity of the rich merchant, the Roman, who, while plundering and subjugating the world, by no means forgot his neighbor, Africa, the Vandal, who simply swept over the land and was no more, the Byzantine, more ephemeral still, the Arab, the Turk, the Black brought from Soudan by traders in human flesh, renegades and adventurers from the entire circuit of the Mediterranean, — all these elements are to be found among the Berbers, even in the most isolated tribes. The Berbers are the least alien of all the intruders in this corner of Africa, for their ancestors were settled here before the arrival of the Arabs; properly speaking, however, there are no intruders in Algeria, since 150,000 to 200,000 Europeans have seen the light in the Atlas Mountains. These sons of Africa have the right to call the country their mother-land.

The Berbers of Algeria are known also as Kabyles, from an Arabic word signifying the "Tribes." In ancient times they were famed as intrepid riders, but they gradually lost their skill as horsemen after the flying camps of the Hilalian centaurs swept across Plain and Plateau, and when they were compelled to take refuge on the lofty buttocks, pointed peaks, jutting rocks, and precipices. Here in the uplands they became mountaineers. Now, to be a mountaineer means to climb difficult steeps and descend declivities, with the nimbleness and sureness of a goat; it means to breathe with full lungs, to drink at pure springs, to feel one's self bold and strong and free; it means to tread the winter snows under cold, inclement skies; it means to struggle with all the strength of one's will against all the forces of nature; it means, also, to seek warmth and happiness at the cottage fireside, in the bosom of the family. And these Berber families are large, so large that they are sending down streams of life, and repeopling the Arab plains; they are everywhere planting, sowing, and reaping fields once stripped from them by men who were at the same time shouting loudly, "Praise to God!" With the Moroccans, Spaniards, and Italians, they are aiding the French in putting North Africa under the plough. Wherever we find a Berber, there we always find a man vigorous and valiant for toil. He directs the murmuring *ain* or rumbling torrent over his meadow, his garden, his fig-orchard, or orange-grove. He gathers the fruit of the trees for the nourishment of his cattle. He stubbornly cultivates the uncultivable and the almost inaccessible. He dwells in solidly built houses, in villages fastened to the brink of precipices. — These pastoral Ilions, in ancient times, were frequently assailed by Achilles, and defended by Hector; for, like the old Greeks, the Berbers consumed their life in fratricidal contests, warring against one another, confederation pitted against confederation, tribe against tribe, and burg

against burg. It was due to these combats that a people made for rule found itself one day governed by a nation smaller and weaker than itself.

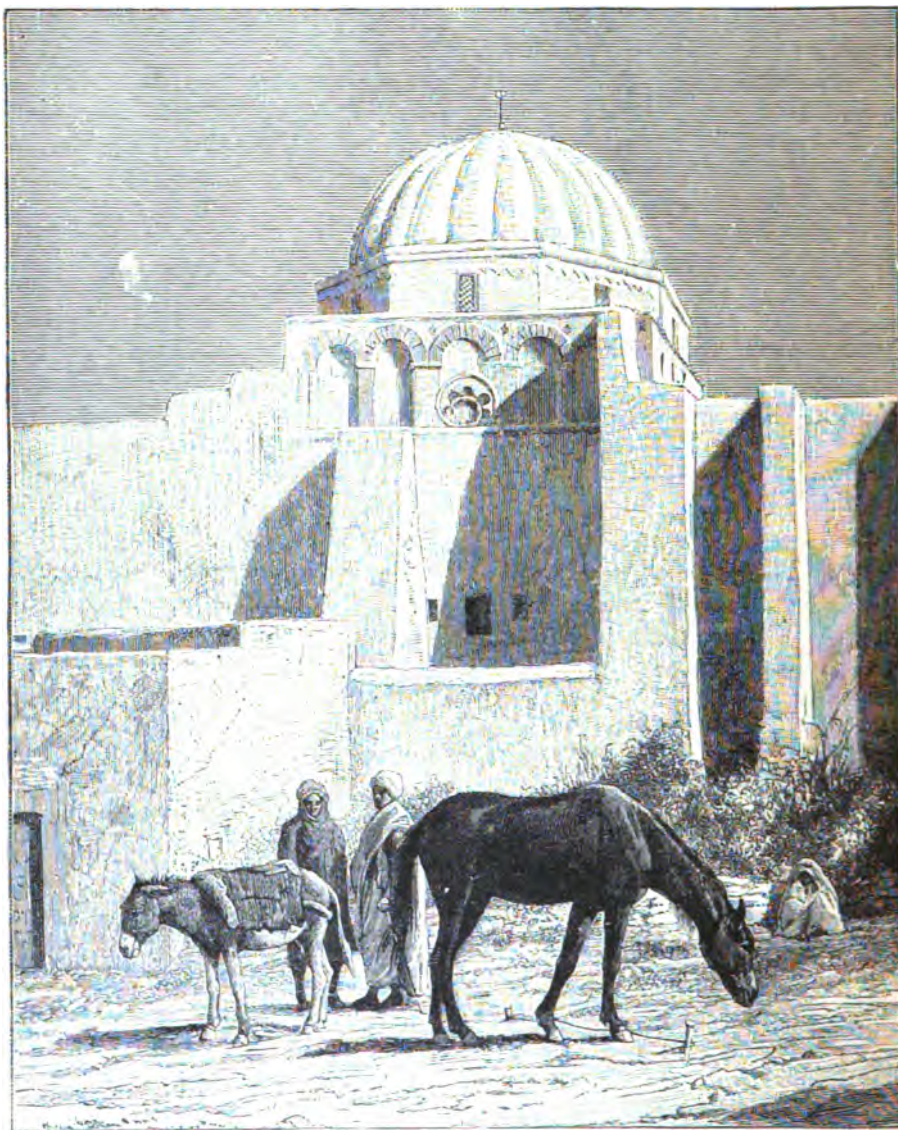
Though the Berbers have all accepted the law of the Prophet, not all have adopted the language of the Koran. Hundreds of thousands, notably in Great Kabylia and in the Aures, have retained their very ancient idiom, which is still imperfectly classified but which has no affinities with Arabic; many of its names are scattered over the map of northern Africa, recognizable for the most part by their two *t*'s, one at the beginning, the other at the end of the word; as, for example, Tug-gurt, Twat, Tademait, Tidikelt, Tafilalt, Tiaret, Takdempt, Temushent, Tarudant, Tumzait, Tasbent, Tamentit, Tadrart, etc. On the other hand, numerous tribes of



MOUNTED ARABS.

Berber origin finally adopted the Arabic language, which was that of the Koran, of the schools, of letters, of good society, of government, of commerce, of the large cities and of the great marts: these constitute the Arabicizing Berbers. Lastly, Arab tribes or fractions of tribes, lost in the Berber *milieu*, have abandoned their guttural explosives for the *patois* of the rustics among whom they live: these are the Berberizing Arabs; they are much less numerous than the Arabicizing Berbers. We shall soon see Gallicizing Berbers here. The Kabyles are a practical race, and have the wisdom to choose the French language in preference to Arabic. They patronize well the few French schools that have been opened in the villages (*taddert*) and on the hill-sides (*iril*). They harvest with the French *colons* in the plains, and live by manual labor in the large towns; they will be seen before long on the quays of Marseilles and in the streets of Paris. As to the number of pure or Arabicized Berbers, and of Berberized Arabs, and of Arabs, the census gives us no light, for all these elements are classed under the head of Mussulmans or Natives.

The Arabs. — The Arabs of Algeria come from the most luminous section of the Orient, — from Arabia, from the palm-groves of the Euphrates, from the desert of Syria, and from the Nile. Long before the close of the century which witnessed



REAR OF THE GREAT MOSQUE, KAIRWAN.

during its first third the preaching, flight, triumph, and death of the Prophet, a band of Arabs invaded the olive-orchards and thickets of Africa, from the Gulf of Sidra to the Atlantic, — a dusty squadron, which, after a bloody raid, rode back at full speed toward the rising sun, leaving ruin in their wake, and having founded nothing but

Kairwan. Barbary remained Berber for four centuries, slowly absorbing all the Punic, Latin, Byzantine, and Vandal elements left on the soil; during these four centuries it conquered, almost without aid from the Arabs, the warlike Iberian peninsula, and covered it with cities. But in 1050 the Hilalians arrived; these horsemen and sabre-wielders seized the plains of the Tell, its plateaus, its broad valleys, every



SKETCH OF AN ARAB FALCONER.

portion of the country suited to the nomad, and from the very first day began to denationalize the Berbers through their government, but, above all, by means of their religion and their sacred book. The Arabs were in turn slaughtered by the Turkish yatagan during more than three hundred years, but they nevertheless continued to assimilate the Kabyles. In 1830, when the French entered Algeria, they thought the entire population was Ishmaelitish. History had deceived them. The "Thousand and One Nights" had bewitched them. The Arab chiefs, those magnificently mounted

and superbly bedecked feudal princes, dazzled them, and Arabic was the sole language spoken in the large cities and along the highways of the country. But it has become evident with time that the nomadic or semi-nomadic Arabs form the smaller and more superficial element of the aboriginal population, while the Kabyles are deeply rooted in the soil.

It would be futile to attempt to estimate the number of pure Arabs in the Algerian Tell, for Arabs and Berbers have been mixed to an infinite degree, to say nothing of infusions of Blacks, Turks, and of renegades and captives from various nations. Many a tribe which boasts of its Arabic blood is derived from exceedingly diverse sources: one claims to be descended from the true Prophet, a claim evidently unfounded; another traces its origin to some ancient Marabout, or some saint renowned for his deeds or sayings, who sleeps under a white Kuba;¹ the ancestors of a third are known to have come from the lofty Moroccan djebel, which is essentially Amazirgh;² those of a fourth arrived from the Sahara, near Soudan. On the whole, it may be said that the Berber race predominates in a large number of Arabic-speaking *duars* (tent-villages). The Arab requires a vast expanse of land, because he is generally either a full-fledged nomad, or a half-sedentary, dwelling in *gourbis* (or small huts), in winter, and in tents, in summer. Now, as the Europeans cannot occupy *en masse* the already too crowded upland regions, they are scattering themselves over the broad valleys, the plain, and the plateau, or, in other words, over Arab territory. And the Arabs are selling their lands as fast as possible, and emigrating, no one knows where, — to Morocco, to the Sahara, or perhaps to Soudan. This race of noble-featured, supple-limbed, swift-footed, quick-witted, imaginative men is, then, on the decline; these agile and daring riders, these lovers of war, whose nostrils tremble at the scent of powder, are losing ground, — but nowhere except in the essentially Arabic districts; wherever there has been a greater or less infusion of Kabyle blood, the Arab stubbornly defends himself.

The Berbers or Arabs of every degree of mixture constitute a people of 5½ million souls, 3,817,000 of whom are in Algeria and 1,500,000 to 2,100,000 in Tunis, where they have not yet been enumerated.

Europeans. — African French. — The Jews, numbering 42,744, form a link between the Mussulmans and Europeans; they are of Arabic tongue but nearly all speak, read, and write French. They were naturalized *en bloc* by a government decree, and are now on a footing with the French citizens, serving with them in the French armies. They are bankers, money-changers, merchants, and traffickers of every grade, dealers in second-hand goods, pedlars, agents, employees of the synagogues, and under-functionaries. They are prosperous and prolific.

The French not only rule in Algeria but they constitute the predominant European element. In Tunis, there are only a few thousand, against 12,000 Italians and as many Maltese; but in Algeria the quinquennial census of 1886 returned 261,591 French, not including the naturalized Jews (304,335 with the latter), nor the more than 54,000 soldiers, while there were only 145,000 Spaniards, 44,000 Italians, and 16,000 Maltese. The French are largely from the south of France and from Corsica, with a strong contingent from Franche-Comté and Alsace-Lorraine; but the departments of the north, centre, and west are by no means unrepresented. The Spaniards come partly from Andalusia, in which case they speak Castilian, and partly from the Balearic Islands, Valencia, and Alicante, in which case they make use of Catalan. The Italians are chiefly from Naples, Sicily, Sardinia, and Piedmont.

¹ A chapel.

² Berber.

Cities. — Algeria embraces the three provinces of Algiers, Oran, and Constantine, beside Tunis. The capital is Algiers, the most populous city Tunis; the other important towns are Oran, Constantine, Bône, and Tlemsen.

Algiers was for a long time a fishing-hamlet of the Berber tribe known as the Beni Mezrenna; later, it fell into the hands of the Turks, and became a rendezvous for pirates under the bloodthirsty pashas; to-day, it is the most graceful of French cities. It rises, white and glistening, out of the blue waves, along the slopes of the Bouzareah, with boulevards, winding streets, dark, crooked alleys, and dangerous stairways. Including suburbs, the charming Algerian capital contains 89,000 inhabitants, of whom 34,000 are French, 6000 naturalized Jews, 26,000 foreigners, 16,000 natives, etc.

Tunis, still an Oriental city, contains the palace of a bey who is without a beylic. Carthage, from seven to nine miles to the north-east, looked out on the same mountains which Tunis views to-day, namely, the Two Horns, jagged Ressas and the distant Zaghuan; but the hills of Carthage rose out of the living sea, while Tunis borders a salt lagoon, not more than a foot or a half deep. Its 150,000 (?) inhabitants include 25,000 Jews and more than 20,000 Europeans. The harbor is at the Goletta, at the extremity of the lagoon.

Oran (pop. 68,000) is built on heights dominated by a red mountain, where superb *castillos*, built by Spain, guard land and sea. It is a very busy commercial town.

Constantine (pop. 45,000) rises, like Algiers and Oran, in the form of an amphitheatre; with a mean altitude of 2000 feet, in a varying climate, it presents the spectacle of a southern city in summer and a snow-clad, northern city in winter. The Rummel flows almost around it, at the base of a formidable precipice; this ravine is 400 feet deep at the point where it is spanned by a bridge, and 650 at the old citadel, or Kasbah.

Bône (pop. 30,000), an entirely European city, lies at the foot of Mount Edough, at the terminus of the Seybouse; its growth will be rapid, as it is backed by the broadest division of the Tell.

Tlemsen (pop. 28,000), the "mother of olive-trees," is situated at an elevation of



A MARABOUT.

2600 feet, in the bosom of a magnificent country. Two-thirds of the inhabitants are Mussulmans, the rest are French, Spaniards, and Jews. Tlemsen has preserved monuments of the era when its rule extended in Algeria as far as Bugia, and in Morocco over the uplands and the valley of the Muluya.

MOROCCO.

The Greater Atlas Range: its Peaks and Rivers.—The Arabs, setting out from Arabia, overran and conquered Persia, Syria, Egypt, Cyrenaica and all the Tell now comprised in Tunis, Algeria, and Morocco. Here, suddenly, the land terminated. The Mussulmans had reached the end of the world, and they therefore called Morocco, Moghreb el-Aksa, the "Extreme West," a name which they apply to the country down to the present day. Including the territory of certain Berber tribes of the southern Atlas slope, which are in reality independent, and vast Saharan oases,—though excluding Twat, which forms no part of the Sultanate,—Morocco embraces from 230,000 to 260,000 square miles,¹ and contains a population of 5 or 6 million; it constitutes nearly a half of Barbary, and certainly the better half. Its superiority over Algeria is most marked in the disposition of the littoral and the height of the mountains. The coast-line of 900 to 1100 miles faces two seas instead of one; Algeria borders the Mediterranean, which is little else than a lake, while Morocco is assailed on the west by the ocean itself, with its tides and its mighty winds from the open deep; and again Morocco looks down from lofty rocks on the Strait of Gibraltar, the most important marine channel in the world.

As for the Moroccan mountains, they have twice the altitude of the Algerian. The Miltin peak, rising on the horizon of Marrakush (Morocco), reaches an elevation of about 13,000 feet. For a long time it passed for the culminating summit of all Morocco, and indeed of the entire Atlas range; but it has been ascertained that there are peaks towering to 15,000 feet, and it is possible that some even rival Monte Rosa and Mont Blanc. The principal crest, which is estimated to have a mean altitude of more than 12,000 feet in a length of 80 miles, sends countless cataracts to the torrents which form the Tensift, the Umm Rabi, and the Wady Sus; it divides the true Morocco from Sus, the country of the argan,² an imposing valley between the loftiest Atlas chain on the north and another gigantic range on the south, sometimes called the Anti-Atlas. This Sus is only nominally dependent on the potentate of Fez and Marrakush; if it were properly a part of Morocco, it would perhaps be the most favored, the richest, and the most fruitful portion of an empire of wonderful fertility, wealth, and beauty. This vast garden, from which life-giving snows are visible on the

¹ The southern limits of Morocco expand or contract according to the strength or aggressiveness of the central government. Less is known of the country than of any other section of North Africa, and there is but a meagre basis of scientific material for the drafting of maps. According to the most recent investigations, the area is 219,000 square miles.—ED.

² This tree (*Argania Sideroxylon*) is confined to a tract stretching along the coast, between the Tensift and the Sus, and it is found nowhere else in the world. It grows to about the same size as the olive-tree, and produces an olive-looking nut, from which the natives extract an oil that is much used in the cookery of southern Morocco.—ED.

north and on the south during long months every year, lacks nothing except perennial torrents and extensive forests. In former times rhinoceroses roamed in the thickets, which were more plentiful than they are to-day; sugar-cane was once grown here, but its cultivation has been abandoned.

The famous Rif, the citadel of Berber tribes, dominating the regions where the Mediterranean approaches the Strait of Gibraltar is not more than 7200 feet in elevation; but it descends majestically to the sea opposite the Andalusian mountains. Rif is an Arabic term, signifying a well tilled country; and this Berber bastion does, in fact, abound in orchards and villages.

The Moroccan Atlas ranges despatch to the sea rivers 250, 300, or 375 miles long; such, for instance, is the Muluya, the longest stream of the Tell after the Shellif. It



MOROCCAN TYPES.

empties into the Mediterranean, not far from the Zafarine Archipelago, a small group of islets, where France sought to plant her banner in 1847; but the Spaniards had unfurled their flag there fifteen days in advance. Among the streams flowing toward the Atlantic are the Sebu, which has Fez in its basin, the Umm Rabi', with a flow of 2500 cubic feet per second, and the Tensift, — three streams by the side of which the Algerian rivers are nothing more than torrid ditches. They pass from the mountain gorges into broad plains, which will in the future be converted into Metidjas, but which to-day, in the hands of the Arabs, or even of the Berbers, do not produce the crops of which they are capable. On the southern slope, the Moroccan Atlas masses support snows of sufficient duration so that the torrents which descend into the Sahara do not disappear like those from the Ksurs, Djebel Amur, Bu Kahil, and the Aures. During the great freshes the Wady Der'a sometimes even reaches the Atlantic; now, this river is more than 900 miles long, and no sooner does it leave

the mountains, where it is drained off by irrigating canals, than it begins to sink into the sands and the fissures of the rocks, or is evaporated by fiery winds. In midsummer, it flows as far as the great bend where it changes its southerly direction for a westerly.

The area of the Moroccan Tell is estimated at about 75,000 square miles, and that of the Steppes at about 25,000; the remainder is a desert except for the oases, which are numerous, rich, and populous.

Inhabitants and Cities.—The population of Morocco is unknown, but it is estimated at 5 or 6 million, or the same as that of Algeria, including Tunis.

Apparently, fully two-thirds of the inhabitants belong to the Berber race; in the Rif country and in the northern mountains generally, they are called Amazirghs; in the southern mountains they are known as Shelluhs. The purest "Libyans" are to be sought in Morocco, in the snowiest, most inaccessible djebels of the Tell; the Tuarick pirates of the Sahara and Soudan have surely absorbed more black blood than the Berbers of the Extreme Moghreb, and the mountaineers of Algeria certainly have more Roman, Arabic, and Christian blood in their veins. Here, as everywhere else in North Africa, the Berbers intrenched themselves in the uplands, when the adventurers of the Hilalian invasion seized valley and plain. They are gradually descending again, and reconquering their vast ancestral domain. It is estimated that they have already regained possession of four-fifths of the soil; they are, however, in the minority in the cities. Had it not been for the arrival of the French on Algerian territory, the descendants of Masinissa's foot-soldiers and cavalry—Berbers, Kabyles, Amazirghs, Shelluhs, it matters not what the name—would have driven the Arabs out of the entire Tell.

These Berbers, whether they have abandoned or retained their native tongue, have intrinsically modified a multitude of the Arab tribes of Morocco by the introduction of a more rustic stock. It is asserted that the Arabs of Morocco relinquish their nomad life more readily than do those of Algeria. And why? Probably because the Arabs of the far west, widely removed from the sources of their "pastoral" blood, have drawn more heavily on the "agricultural" blood of the Atlas mountaineers; or because the Moroccans are unconsciously moulded to a sedentary life by the ruggedness of a country which is distributed in mountains where a tent would bend beneath the snow, or in precipices where horses can neither gallop nor trot, or in fields well watered by fountains or torrents. On the other hand, the configuration of Algeria tends to make the Algerians vagabonds; is it not a land of broad valleys, of boundless plateaus, of alfa fields, of extensive shotts, of entrancing space, of limitless horizons, where one sees far away to the northward the indigo waves, and yonder the fulvid expanse of the Great Desert?

Admitting two-thirds of the inhabitants of Morocco to be Berbers, the remaining third is composed chiefly of Arabs, pure, or mixed with Berbers, or tinged with black blood from the long infiltration of slaves from Soudan. Then follow the Arabicized descendants of the renegades who settled in this country; the Jews, largely descendants of Israelites driven from Spain in 1391 and in 1492; and, lastly, the Blacks. There are few Europeans,¹ and among these the Spaniards rank first in number, the French second. Both Arabs and Berbers profess Islamism; the Jews adhere to their ancient faith. The Arabic tongue predominates over the Berber as much as the Berber race predominates over the Arabic. It is spoken in harsh, consonantal dia-

¹ About 1500, 1000 of whom live in Tangier.

lects. Many of the Jews understand Spanish, the language of their ancestors. The Francophones are still widely scattered, but their number has been increasing since the Berbers of eastern Morocco began to push over into Algeria, where they are employed in planting, reaping, digging, and breaking stones on the roads.

Faz, or Fez (pop 100,000 [?]), the principal city, and one of the capitals, is situated at an altitude of 1300 feet, or something over, on the Pearl River (in the Sebu basin), at the foot of Djebel Salah, which dominates it by 1800 feet. Under



Fez.

the Almohades,¹ this Mecca of the Barbary Far West contained 500,000 inhabitants, and two magnificent mosques, one the largest, the other the most beautiful of African Islam.

Morocco, or Marrakush (pop. 40,000), the second of the quasi-capitals of the Sultanate, once possessed, according to Arab tradition, a population of 750,000. It rises, majestic and solitary, amid palm-groves, 1650 feet above sea-level, in the plain of the Tensift, within view of the Greater Atlas chain.

The Presidios.—Scattered along the Mediterranean shore of Morocco, from the Strait of Gibraltar to the Algerian frontier, are several Spanish *presidios*, which serve

¹ A Mohammedan dynasty that flourished in Africa and Spain during the 12th and 13th centuries. It was founded by Mohammed-Ibn-Abdallah; and the last ruler of the race was Abu Dabus Edris. The dynasty became extinct in Spain in 1257, and in Africa in 1269. — Ed.

as places of deportation for criminals, and oftentimes as retreats for political exiles. All together, they contain only 16,000 inhabitants, nearly 10,000 of whom are in Ceuta, which faces Gibraltar, at the very point where the strait broadens out into the Mediterranean. — Peñon de Velez is nothing more than a wretched, scarped islet, destitute of a single fountain, 1300 feet from the Rif shore. — Alhucemas, another dry rock, also contemplates the Rif. — Melilla, on a small peninsula projecting from the peninsula of the Cape of the Three Forks, often wages war against its Kabyle neighbors. — The Zafarines, an archipelago of three islets, keep watch at the embouchure of the Mulaya.

THE SAHARA.

Size. — Oases. — Simoon. — The Sahara separates North Africa from Soudan, which is the beginning of the true Africa. The word "separates" is nowhere more appropriately applied than here. The Great Desert forms a more complete barrier than mountains, which can always be traversed by the cols, than the ocean, which is scorned by ships, than the *tundra* tracts, which freezing makes passable for portions of every year. Stretching from the Atlantic to the Red Sea, across the valley of the Nile, and from the southern base of the Atlas range to Soudan, with a length of 3000 to 3750 miles, and a breadth of 600 to 1200, the Sahara, nevertheless, supports only 2½ million inhabitants. Yet fountains and Artesian wells have created magnificent palm-groves in the north, while in the south, under the tropic of Cancer, there is a sufficient rainfall to partially fructify the soil, and trace steppes along the margin of the furnace; all the rest of the Sahara is a pitiless waste. Still, its terrors and horrors have been exaggerated. It is not to us, as it was to our fathers, an expanse of sand trembling under every wind, and rising and advancing in cyclones against the caravans, like the Typhoon against ships. It is rare that the violent, burning Simoon rolls its winding-sheet of dust around the traveller in the Desert; more persons die there of thirst than perish by this wind.

Far from condemning the Desert to eternal sterility, there are those who now believe in the possibility of its partial reclamation. This *sebkha*, as the Arabs call it, this maze of aregs or dunes, of blistering rocks, of grassless, treeless, waterless channels, without hamlets, and almost without tents, has not always been so worthless and dead. Tradition teaches us that springs, streams, wells, cities, barley-fields and corn-fields, palm-groves, and even forests, have disappeared here; these might be restored by the planting of trees. Beside the date-palm, it is possible to grow pines, gum-trees, mimosas, and turpentine-trees in the Sahara; the eucalyptus, the giant of the Desert as well as of Australia, will thrive in the hollows into which a little rain-water or the ooings of the rock filter; and, lastly, there are doubtless subterranean lakes, here and there, and a few running streams, which might be reached by Artesian wells. A heavy shower will clothe the most arid sands from the Tell to Soudan with verdure. "One rainy night," says the Saharan, "makes the grass grow for three years."

Flora and Fauna of the Sahara. — This vast solitude is destitute of inhabitants,

because of the scarcity of plant and animal life. Thistles, wormwood, prickly shrubs, and an occasional patch of grass nursed by a tiny, invisible rill, constitute all the vegetation of the Sahara, outside of the oases. The famous "lion of the Desert" is a myth. This king of beasts loves freshness, boughs swaying in the wind, fountains and prairies, and above all the ox, heifer, sheep, horse, and gazelle, which are to be found only where there is green grass; he may roam along the hem of the Sahara,



A SIMOON.

especially in the steppe-like regions of the south (and it is possible that huge pythons also exist there), but he is never encountered in the central wastes, any more than are the ostrich and the gazelle. Animal life in the Sahara is confined almost exclusively to the scorpion, large and small lizards, mice, and the *leffâ*, a horned viper, the sting of which causes instantaneous death.

South of Algeria and Tripoli, there are depressions below the level of the Mediterranean, but these are neither numerous nor extensive. The mean altitude of the

Sahara is apparently between 1100 and 1300 feet; here and there, sandstone or granite mountains, yellow, or black, or reddened with iron-ore, lift their heads 3000, 6000, 8000, or perhaps 10,000 feet. Djebel Hoggar, or Ahaggar, the loftiest of them all, is capped with snow three months in the year; it sends down a few silvery streams, but they run only a short distance.

Arega, or ergs — in other words, sands; hammadas, or rocky plateaus; mountains carved into countless citadels, and wondrously transformed by the magic of the sunlight when seen from a distance; depressions; soil receiving an infinitesimal amount of moisture, and impregnated with salt, which is sold to the Soudanese;¹ oases, where palms furnish a shade for fruit-trees which themselves shelter corn, barley, grass, and forage from the burning sun; moving from oasis to oasis, or from shore to shore of the waterless sea, caravan trains, — on the alert, for the Desert is vast, and the plunderer treacherous and fleet; ungainly, patient camels, thriving by hunger and thirst, meharis, or race-camels, which can make 75 miles a day without being fatigued; and over all this, over the bare immensity as over the oasis, the dry north and north-east winds, which constitute the chief cause of the Saharan aridity; temperatures of 115° to 120° F. in the shade, and 154° in the sun; nights in which the mercury sometimes sinks just before dawn to 9°, or even 12° below the freezing-point; heavy dews; a climate for the most part exceedingly healthful, notwithstanding the fluctuations in temperature; in the oases trembling *ksurs*; in these *ksurs*, Arabs, Berbers, Blacks, or cross-breeds of the three races, — here we have the various features of the Sahara.

The Arabs occupy the western section, near the dunes of the Atlantic; the eastern, approaching the Nile; the south-west, in the sands along the Senegal River, but they have intermixed there with the Berber race; and again, at the base of the Atlas Mountains, they are intricately crossed with Berbers. Passionately fond of nomad life, they find their highest happiness in the Desert, and their poets sing its praises with enthusiasm. They have here what they love most ardently, — sun and space. They are fervent Islamites. The Berbers have their nomads also, the Tuaricks,² who scour the sands between Fezzan and Timbuktu, mounted on meharis, and armed with a long lance and a curved sabre. These swarthy filibusters protect their faces from the Saharan sand with a veil called a *litham*, but the women (who are treated with great respect) always go with faces uncovered. They are divided into the Azgher and Ahaggar, or northern Tuaricks, the Kel-owi and Sorghu, or southern Tuaricks, and the Awelimmiden, or Tuaricks of the Niger; they have their Berber dialects, their alphabet, and a few rock inscriptions. They adore their redoubtable Sahara. The Targui is familiar with every well, every spring, every spot into which a drop of water oozes, all over this limitless, thirsty land. He knows every dune where a spear of grass or a shrub springs up, every hill from which watch is kept on the caravans, every ravine that can serve as a hiding-place, every trap where a man can be waylaid, every path for flight or pursuit. It is this perfect acquaintance with the Desert that makes these pirates formidable, and not their multitude. They number scarcely 100,000; moreover, the Awelimmiden, who compose the bulk of the nation, do not dwell in the Sahara, but in the savannas between the Sahara and the Niger, and in the plain of this stream or on its islands.

The Blacks, who through their women have modified the greater part of the

¹ Salt is so scarce in Soudan that it exchanges there, we are told, for its weight in gold-dust.

² The plural of Targui.

THE EFFECT OF MIRAGE IN THE DESERT.



nomad or sedentary tribes of the Sahara, are of almost unmixed race in certain of the oases which border Soudan. Crossed with Berbers, they occupy, with the Kel-owi Tuaricks for neighbors, the large oasis of Air, or Asben, which consists of mountains 5000 feet in elevation, with gorges where there is a slight rainfall, so that some of the valleys are not entirely destitute of verdure: the character of the soil, as well as the features and complexion of the inhabitants, announces the proximity of this oasis to fertile Soudan. Here rises Agades, the remnant of a city of 50,000 souls, if we can credit the tales of the Desert.

After the independent country of Air, after the Tripolitan Fezzan, after Ghat, which has been Turkish since 1874, after the wonderful palm-gardens of the province of Constantine, after Taflelt, which contains 100,000 inhabitants, and belongs to Morocco, the principal oasis is Twat. This depression is equidistant from Algiers, Oran, Morocco, and Timbuktu, it being about 875 miles from each of the four cities; it is said to have at its disposal more than 2800 cubic feet of water per second, supplied from a net-work of subterranean passages. It will eventually form a part of the Algerian Sahara. It is a confederation of Arabo-Berber villages where the *ksurs* of Ain-Salah (or Insalah) dominate, and it supports about 70,000 inhabitants (others say 300,000).

The district of Aderar owes this Berber name of Aderar, "uplands," to plateaus and djebels which overlook on the north the true Sahara, and on the west and south the steppes and plains of the Niger. It lies north of the 16th parallel. It is at present the fortress of the Awelimiden Tuaricks, but, as it is directly south of Algiers and Oran, it will probably fall into the hands of the French at some future day.

S O U D A N.

The name Soudan, which is applied to the vast country stretching south of the Sahara, is the termination of the Arabic expression, *Blad es-Soudan*, signifying "Country of the Blacks." For convenience in describing this region, it may be divided into Central Soudan and Maritime Soudan. Central Soudan comprises two basins. One, that of the Niger, opens on the Atlantic; the other, that of Lake Chad, would open, like the Nile, on the Mediterranean if its stream was not exhausted on the way. They are separated from each other by the Kano plains, the verdant heights of Zegzeg and Bauchi, and the mountains of Mandara.

The Niger.—The distance from the source of the Niger to its mouth is scarcely 1200 miles in a straight line, and yet it has a course of about 2600; in length, it is surpassed in Africa by the Nile and Congo alone, and it is evidently second only to the Congo in the yearly discharge of water. Its drainage area has been estimated at 1,230,000 square miles, and at a much higher figure, admitting that its channel opens below Timbuktu to the almost waterless bed of the Wady Msaud: the latter comes from the high Atlas range, where it is called the Wady Gir. The Niger unites the waters of three mother-branches, the Tembi, the Falico, and the Tamincono, all of which rise in the Kong Mountains; the source of the Tembi, the principal branch,

is in Mount Loma, a *massif* of 4396 feet (?), behind the coast of Sierra Leone and Liberia. The rapidly swelling Niger (under the name of Dialiba) flows in the uplands for a distance of only 330 miles, and these uplands are low mountains, with no persistent snows, and perhaps without transient snows. At Bammako (a French fort since January 30, 1883), the river is 1300 feet broad, powerful, and with a strong current; six or seven miles below Bammako occur the rapids of Sotuba. The stream passes Segu Sikoro, the capital of a decayed Mussulman empire (the foe of the pagans among whom its waters are cradled), then it is doubled by the accession of a current more than 500 miles long, called the Mahel Balevel, or Bakhoy, *i. e.*, "White River."



LAKE CHAD.

Beyond this point, it skirts the sands of the Sahara, and is forced by them from its north-easterly to an easterly direction, at Timbuktu; then it turns south-south-east, and flows to the Gulf of Guinea.

Above Timbuktu, the Niger encloses two very large islands, namely, Burgu, 112 miles long, and Jimballa, with a length of 250. It arrives, after a journey of about 1150 miles, not exactly before Timbuktu, but before its two ports of Karoma and Kabara. Above and below the city, it winds about for scores and scores of miles, resembling the Nile of Nubia and Egypt, since it constitutes all the life of the Desert; where it passes with its canals, there, and there only, are inhabitants to be found. A great, dead river reaches it from the Sahara of the Tuaricks, — a trench 930 miles long, originating in the same mountains with the Igharghar: this *wady*, called the Ballul Bassa, is destitute of running water in normal times.

Below Timbuktu, the Niger becomes a net-work of islands and side-creeks, with a breadth of 6000, 6500 to 13,000 feet. It skirts steppes inhabited by swarthy Awelimiden Tuaricks and black Sonrays, the latter sowing and reaping for the former, as

the weaker are wont to do for the stronger. The dispersions and expansions of the stream are followed in places by very narrow constrictions; in the pass of Tosaye, for example, it is only 295 feet from bank to bank. Near Rabba, rocks and rapids terminate, and the Niger, becoming navigable for ships, moves toward its confluence with its largest tributary. This principal affluent, the Binue, the "Mother of Waters," in the language¹ of its native land, Adamawa, is a brown flood, known to the Negroes along the banks under different names, all signifying, in their various idioms, "Black Water," as opposed to the Niger, which, to them, is the "White Water." Above and below the junction of the Binue, the Niger twists among islands which offer a miry abode to crocodiles and hippopotamuses. The valley, under its brilliant sky, possesses the beauty lent by lofty mountains and by the opulence of a soil in which the cotton-plant grows to the height of 100 feet. From this cut, the river enters its delta, the alluvia of which exhale deadly poisons under the equatorial sun. Black men are rare in the delta, and no Whites settle there; the latter ascend the stream farther to win gold on the Niger and the Binue. The delta of the Niger opposes its mangrove-trees and soft mire to the sea along a front of about 200 miles. It embraces almost 10,000 square miles; its largest channel is the River Nun. The mean discharge into the Atlantic is unknown.

Lake Chad.—About 680 miles from the Atlantic bays dominated by the proud peak of the island of Fernando Po, and about 1200 miles from the inner extremity of the Mediterranean Gulf of Sidra, lies Lake Chad, or Tchad, or Tsad; though situated 800 feet above ocean-level, it has not the force to transmit a single stream to the sea. The area varies between 5000 and 40,000 square miles, according to the season of the year. It is a lagoon, not more than 13 to 16 feet deep at the most. When the sun has evaporated the muddy water accumulated from the summer freshets, the low, almost countless islands are united, and the larger half of the lagoon becomes solid land (with boggy furrows), where the herds of the savage Budduma² come to pasture. Lake Chad is surrounded by reservoirs called *komadugus*;³ the rivers formed by the overflow during the floods are precipitated into these hollows, but when the waters shrink, a contrary slope is established, and the komadugus flow back into their urn.

In very dry years, the immense tribute poured into Lake Chad from a basin which is visited by tropical rains, and which is nearly six times the size of New England, is drawn off by evaporation, and, doubtless, to some extent, also, by underground drainage; but in excessively wet years the lake discharges a river, the Bahr al-Ghazal, which descends, on the north-east, to Bodele, a depression near the oases of Borku, as Borku itself is near the very dry and lofty mountains of Tibesti. The waters of Lake Chad are not brackish; the rhinoceros flounders in it, the crocodile dozes on its floods, the hippopotamus wallows in its mire, the elephant fords its gulfs and channels, and the buffalo roams in the tall grass along the shores. It receives, from the west, the Waube, which flows through the most favored of the Bornu valleys, and from the south the Shari, or Sâri. The source of this latter stream is unknown. In its upper course, it is possibly the Wellé,⁴ which flows south-west of the rivers forming the Nilotic Bahr al-Ghazal. In its lower course, it adorns a delightful country; the distant mountains, waters 2000 feet broad, the tropical sky, the huge trees, and the vigorous growth of grass, make this valley of central Africa a charming oasis in

¹ The Batta tongue.

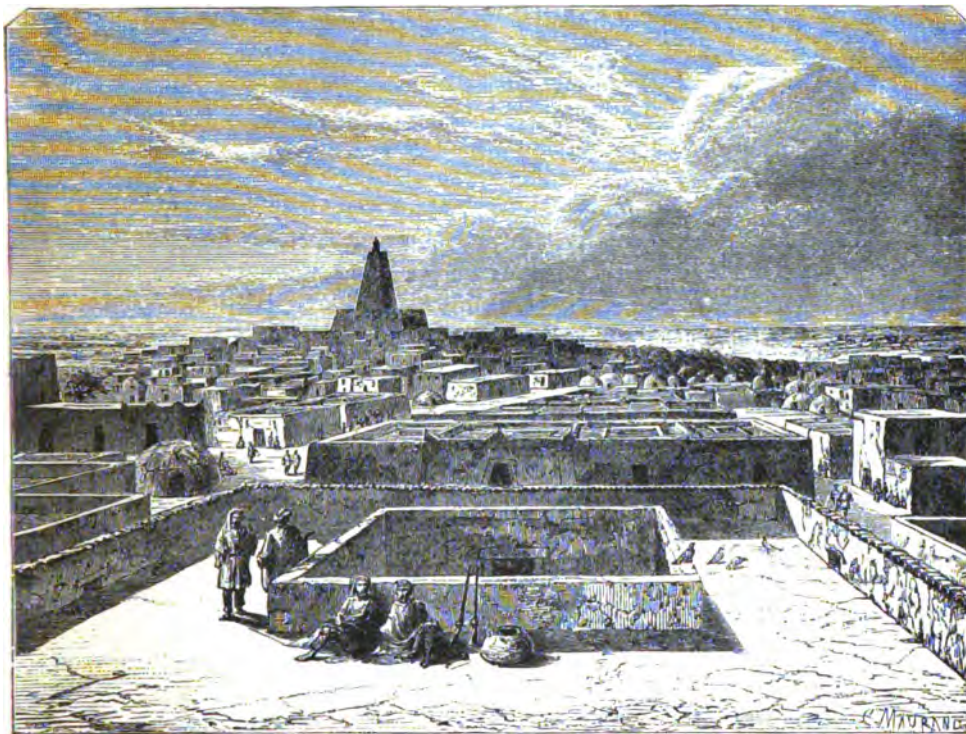
³ Literally, "brooks."

² This tribe is identical with the Yedina. — Ed.

⁴ See page 467.

which abundance reigns;—all the Arcadias are not in Greece, nor all the vales of Tempe in the maze of Thessalian mountains. The basin of the Shari is estimated at 350,000 to 355,000 square miles at the very minimum, — supposing that the Wellé does not belong to it, but flows south-west to the right bank of the Congo. With the other tributaries of Lake Chad, and the depressions of the Bahr al-Ghazal stretching away to the north-east, this entire inland basin must embrace about 700,000 square miles, an area which would be greatly increased if the Wellé should prove to be connected with the Shari.

Central Soudan—this land of plenteous rains and torrid suns—is densely peopled. On the margin of the Sahara, especially on the left bank of the Niger, for a



TIMBUKTU.

long distance up and down the stream from Timbuktu, Arabs, Berbers, and Tuaricks, pure or mixed, hold the empire, extorting tribute from the caravans, as brokers or brigands. Beside their trade of rovers of the Desert, the Tuaricks possess lands along the banks and on the islands of the river, which are cultivated by their black servants. The Arabs and more or less Arabicized Berbers are merchants in the commercial cities on the Niger, notably between Sansandig and Timbuktu. Through their influence, through the conquest which Islam has accomplished over a part of the country, Arabic has become the polite idiom of Soudan. However, there is a noticeable falling-off in the use of the language of the Prophet, although there has been no halt in the progress of Mussulmanism. Arabic is employed by the slave-

hunters and merchants in central Africa; and only a few years since it was spoken at the Bornu court, but the national Kanuri has been restored there.

South of Timbuktu, on the right bank of the stream, dwells a black people, called the Sonrays, who have preserved their language, though they have been stripped of their power. Ascending the Niger, we encounter, first, in Massina, Fulahs, or Musulman Negroids, who are converting the pagans at the point of the lance; then, in Bambara, black Bamanaos, whom the Fulahs have not yet been able to Islamize; and, lastly, on the upper stream, in the countries backed against the Kongs, Malinkés, or Mandingoes: these chocolate-colored Negroes, these keen-witted traders, are the Jews of Soudan. They speak a guttural idiom.

The Fulahs, who are copper-colored, and finely proportioned, are also called Fulbe,¹ Fellani, Fellatah, and Peuls; they are the predominant people in Central Soudan and on the Senegal River. They are tillers of the soil and shepherds; they were living in peaceful hamlets, in the land of the Blacks, when the energy of a great man, and the fanaticism of a religion which tolerates no schism, suddenly transformed them into a race of conquerors. At the beginning of the present century, Danfodio, a Pullo returning from a pilgrimage to Mecca, began to preach the *djehad*, or holy war, against the Negro miscreants; he soon found himself ruler from Lake Chad to beyond the Niger, over a region one-eighth the size of the United States, with Sokoto as his capital. Whence came this people which flashed all at once into Soudanese history, this graceful, handsome-featured race, much more closely allied to the Whites or the Arabs than to its black neighbors, and strongly resembling the superb copper-hued tribes of Abyssinia? It has been classed with distant peoples in India and the Malay Archipelago, but it must have come from less remote regions, probably from the southern slope of the Greater Atlas range, across the Sahara; ten or twelve centuries must have elapsed since its invasion of the Senegal region, from which its pastoral tribes gradually moved eastward as far as Lake Chad.

Danfodio's empire did not include the Fulahs of the upper Niger, nor those of Senegal, the first home-land of the nation in Soudan. It lost all cohesion almost immediately, and split into the two kingdoms of Sokoto and Gando. The Haussa countries from which it was formed were never subjected to the Fulfulde idiom. Haussa is more widely spoken here to-day than Fulfulde: both of the languages are very beautiful. Haussa originated, perhaps, in the Orient, for it bears some resemblance to Semitic tongues, but, on the other hand, certain analogies with the Berber of the Tuaricks are not wanting. Far from having perished or retreated before the Fulfulde, it has become the common speech of the greater part of the Soudanese, from Bornu to the delta of the Niger. Fulfulde has been called the "Italian of Central Soudan." It is much more harmonious than Haussa; it abounds in *r's* and in vowels generally. In the formation of the plural, no account is taken of the radical of the word, and herein lies one of the chief difficulties of the more than difficult idiom of the Fulah shepherds.² One of its peculiarities,³ compared with the Aryan languages, consists in the absence of all distinction of words in regard to sex. Fulfulde makes the division into the human and the non-human, the latter including animals, plants, and inanimate objects. This classification General Faidherbe designates by the terms "hominine" gender, and "brute" gender.

¹ This is the ethnic name; the singular of Fulbe is Pullo.

² For instance, the plural of *gorko*, "man," is *worbe*; of *debbo*, "woman," *reobe*; of *amru*, "stick," *tiabbi*. — Ed.

³ Shared by several Negro tongues.

The Fulahs are weak as regards numbers; in many sections they are almost lost among their subjects, and they are gradually blending with these latter, not by means of the daughters of the race, who despise the Blacks, but through the sons, who by no means scorn alliances with Negresses. In the Soudan of the Niger they are not massed as a nation, except on the plateau of Zegzeg, in Gando, and in Massina.

The suzerainty of France is recognized on the Upper Niger, but she has direct possession of nothing but the post of Bamaku, or Bammako, situated on the river-bank, a few miles above the rapids which terminate its upper course. Descending the stream, we enter the empire of Segou, then Massina, and farther down we reach Timbuktu. In Segou, the Sultan resides at Segou Sikoro, on the Niger, among pagan Bama-naos, who have been subjugated by fire and sword to the Mus-sulman Fulahs. This ruler has recently accepted, though very unwillingly, the protectorate of France. In Massina, the population of which is reckoned at 5 millions, the capital, Hamda Allahi (*i.e.*, "Praise to God"), rises a short distance from the right bank of the stream.



YOUNG MALINKÉ GIRL.

Timbuktu once ranked as a continental Alexandria, owing to its position on the great bend of the Niger, at the junction of the routes from the Desert, and in contact with the Sahara, with Soudan, and with two races of mankind. Before any European had trodden its obscure alleys, our imagination had reared there a metropolis of interior Africa. No one fancied a Babylon, an Athens, or a Rome, for it was well understood that gigantic towns and glorious cities were impossible among the Negroes, as well as among their bronzed neighbors of the Sahara; but Timbuktu was supposed to be an important commercial city, a huge bazar where the Blacks sold Soudanese gold-dust by the sackful to the merchants of the caravans. It is nothing but a heap of ruins now, with 10,000 or 12,000 souls; the population consists of an aristocracy of Moorish merchants and a proletariat of Sonrays. It is about eleven miles from the Niger, in the Sahara, and not in Soudan.

Gando.—In Gando, or Gandu, a country of the lower Niger, above the Binue, there are several busy commercial towns which are important marts. Bidda, some leagues away from the river, contains perhaps 90,000 inhabitants. The population of the entire state is rated at 5,800,000. The people are largely Fulahs.

Sokoto. — The inhabitants of Sokoto number possibly 12 millions ; they consist of Peuls with an under-stratum of Blacks, or, more accurately speaking, of very intelligent Negroids ; these Negroid Haussas furnish the English with recruits for the armies and the police forces of their West African colonies. Sokoto is not just now the capital, and its 50,000 to 100,000 inhabitants have dwindled to 20,000 or not more than 10,000. It borders a left affluent of the Niger, as does also the city which has superseded it as the residence of the great emir of the Fulahs of Sokoto, — Urno, or Wurno (pop. 15,000). Kano (pop. 35,000), south-east of both the old and the new political capitals, in the basin of Lake Chad, passes for the commercial metropolis of Soudan.

Burnu, or Bornu. — Adamawa. — Bornu may contain 5 million inhabitants ; these are ugly-featured, Kanuri-speaking, sedentary Negroes, nomad Arabs, and cross-breeds of the two races. The state is no longer subject to the Fulah potentate of Sokoto. The sultan resides at Kuka, or, more accurately, Kukawa — literally, “city of the baobab :” it owes this name to an enormous tree which shaded the field where the founder of the town built his royal residence, in 1814. Kuka rises about twelve miles from Lake Chad, in a stony plain, which is wooded in spots ; the annual rains transform the entire region into a swamp, the waters of which unite with those of the lake, and enter the very streets of the city. Kuka has the appearance, the movement, the life, and the commerce of an imperial city, and yet its palaces are nothing but square clay piles, and its burgher dwellings are straw ricks with ostrich eggs as their only ornament.

South of Bornu, on the broad Binue, the muddy floods of which spread out over the flat campos along the banks, stretches the magnificent country of Adamawa, or Fumbina. This district is subject to the Fulahs ; it formed their last conquest toward the south-east. The Fulahs are not the chief people here to-day, but great numbers of them tend their flocks in the fat pasture-lands among the Blacks.

Bagirmi. — Waday. — Bagirmi lies east of Bornu and Adamawa, on the lower course of the Shari, at a slight elevation above Lake Chad ; it is inhabited by Negroids who have been converted to Islamism, and by Arab tribes. In the days of their glory, and even very recently, the Bagirmians systematically raided and massacred the pagan tribes within their reach. They were a blood-thirsty people. To-day, their splendor is paling, and they have been obliged to recognize the suzerainty of the Sultan of Waday :

Waday¹ slopes toward Lake Chad : the Batha, the central river, which flows only about three months in the year, empties into Lake Fitri ; in the rainy season this lake would discharge its waters into Lake Chad, if the outlet were not stopped up, or arrested on its way. The fruitfulness of the entire country — mountains, steppes, savannas, and deserts — depends chiefly upon the rainfall. Northern Waday stretches toward the mountains of Tibesti, where the Tedas languish with thirst ; it is drier and more sterile than the eastern, central, and southern districts. This north is especially the home of the ostrich and of the antelope. The ungainly bird is not found in the centre, but the antelope occupies the steppe there, with the double-horned rhinoceros, and it is encountered again in the south, with the rhinoceros and the elephant as neighbors.

The 5 million inhabitants are composed of Maba Negroes, Blacks of divers races and divers tongues, multitudes of pure Arabs, and a large number of Arabs of mixed

¹ The real name is Bargo, and that of the inhabitants, Bargawi.

race. The Maba preponderate to such an extent that the country is called Dar Maba, Dwelling-place of the Maba, as well as Dar Waday. The Maba are bronzed rather than black. They have been Mussulmans for more than 250 years. In character, they are haughty, imperious, and aggressive, and war has no terrors for them.

Including the feudatory States, the sultan, who resides at Abeshr, rules a motley people, numbering 5 millions.

West of the Niger, plateaus and mountains dominate a seaboard furrowed by an infinitude of streams flowing to the Atlantic. This seaboard, constituting Maritime



HOUSES IN SEGU SIKORO

Soudan, comprises from north-west to south-east: Senegambia, Sierra Leone, Liberia, and Guinea, all extraordinarily fruitful countries, and at the same time exceedingly unhealthful, owing to the annual overflow of the streams, rivers, and *marigots*,¹ and the deposits of alluvia.

Senegambia: The Senegal and Gambia. — Inhabitants. — European Colonies. — The word Senegambia is obtained from the fusion of the names of two streams, the Senegal and the Gambia.

Two currents unite at Bafulabe (*i.e.*, the Two Rivers), a French fort, situated at an altitude of 300 feet or over, and 646 miles from the sea, following the thread of the waters. At the confluence, the more powerful of the streams, the Bafing, or Black River, has already journeyed 350 to 375 miles. It is 1475 feet broad at this point. It rises at an elevation of about 3300 feet (?) on Fulah soil, in Futa Jallon, a sort of acropolis, which despatches a fan-shaped group of rivers to the coast, and a

¹ A name used in Senegal to denote the side-channels of the stream traversing the country. — Ed.

multitude of torrents to the upper Niger. The other branch, the Bakhoy, or White River, already swollen by the Baule, or Red River, reaches the junction after a course of 280 miles, with a breadth of 590 feet; it has its sources at an altitude of about 1600 feet, on a plateau very near the "Father of Soudanese waters." These are the two fountains of the Senegal, a stream nearly 1000 miles long, and draining a basin of 170,000 square miles. During April and May the flow is very scant, and at the end of the dry season it is only 1750 cubic feet per second at Bakel, where all the large branches have been received; but during the season of tropical rains the waters rise 50 to 65 feet in the uplands. It attains its maximum volume during the first half of September. It enters the lowlands only after a succession of rapids and water-falls: at Guina the torrent makes a leap of 160 feet; at the Felu falls it drops from 50 to 65 feet, between fantastic rocks. These are sudden plunges, but elsewhere it descends in rapids; it is practically a chain of deep reaches behind rocky barriers. These obstructions, which ought to be carefully preserved, convert the Senegal into a series of reservoirs superposed one above the other, and conserving for the dry season a river of about 1750 cubic feet per second; this volume is several hundred times less than that of the freshets.

Below Bakel, the Senegal encloses a large island called Morfil, 112 miles in length. It forms a boundary line between the White and the Negro, the nomad and the sedentary, the Sahara, which produces gum, and Soudan, which produces everything wherever the inundation of the stream evokes fertility. Undulating with crocodiles, and noisy with hippopotamuses, it takes its way toward the island of Saint-Louis; at this point the right arm is only 500 feet from the Atlantic, but the river, which has bent its course to the Saharan sand ever since its exit from the mountains, turns once more, and does not enter the sea until 10 miles farther down. It terminates on a straight, sterile, uninhabited coast, composed wholly of dunes. The mouth of the Senegal is obstructed by an extremely dangerous bar.

The Gambia is a much smaller river, having a length of 600 to 750 miles, in a basin of about 70,000 square miles. It rises in the same Futa Jallon with the Senegal, under the same climate, with the same two seasons, one of deluge, the other of drought; it enlarges into a small inland sea, like the Tagus at Lisbon; then, like the Tagus, it contracts again, but its embouchure, which is navigable for the largest vessels, is, nevertheless, 11,500 feet broad.

The lower Gambia has 48 rainy days in the year, against 35 on the lower Senegal; the former is perceptibly more tropical, but opulence of vegetation begins still farther southward, on the small rivers where the rains are excessive. From the Senegal to the Gambia we pass from 35 to 48 rainy days, from the Gambia to the Casamance, from 48 to 84, and, again, among the Portuguese of Bissão it rains 111 days in the year, and among the French of Boké, on the Rio Nuñez, 157; doubtless, there are as many or more rainy days on the Rio Pongo and the Mallecoory. Along all the rios, as far south as Sierra Leone, the massif of Futa Jallon, pressing close upon the ocean, makes the coast a narrow "Beira mar."

The right bank of the Senegal is occupied by Moors. These Moors are Arabs crossed with Zenagas, a Berber people, whose name appears in a corrupted form in the word Senegal. They are known as Trarzas, Braknas, and Duaish; they plant their tents near the stream during the half of the year corresponding to our winter and spring, then, when the inundations begin, they move northward with their flocks, and penetrate into the Sahara. They had crossed the Senegal, and



WOMEN OF THE UPPER SENEGAL.

were pillaging and enslaving the black country, when the French arrived and drove them out of Soudan into the sands, rocks, and gum-tree groves of the Sahara.

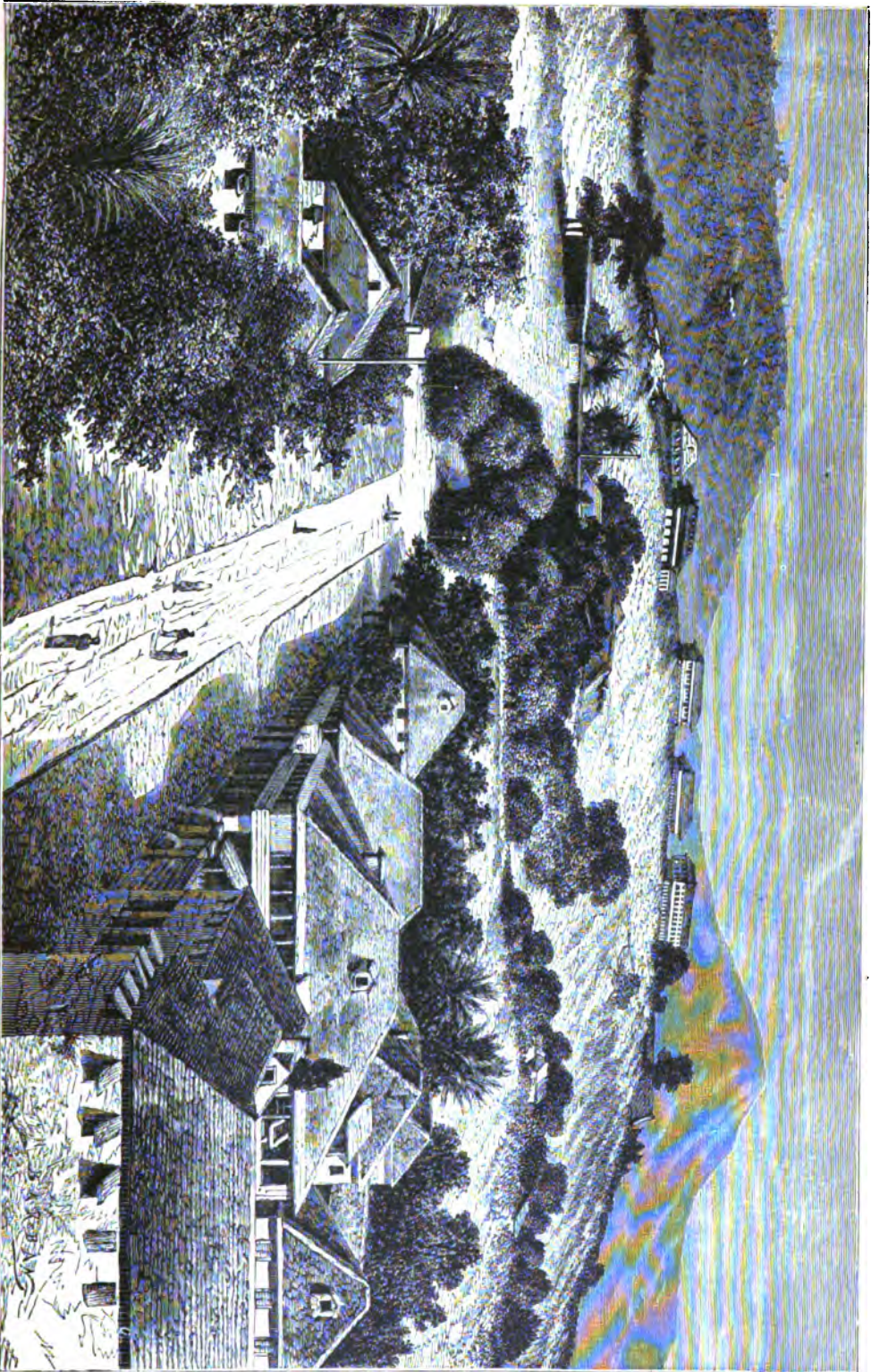
Blacks, copper-colored peoples, and half-castes are numerous on the Senegal. The black and glossy Wolofs inhabit the lower course of the stream, and the coast of Ualo and Cayor as far as Dakar; they furnish the French with excellent seamen.—The very intelligent Soninkés, inferior in stature to the Wolofs, are found on the Kaarta slopes and plateau, in the middle course of the stream; they supply volunteers to the little French army of the Senegal, and many of them understand French.—The Malinkés are powerful Blacks scattered along the Faleme, a large tributary of the Senegal, and along the Gambia and the Casamance; they are fond of pillage, warfare, and trade, and their pedlars are encountered everywhere throughout Soudan.—The Bambaras, the principal people of Kaarta, are of medium stature, with strongly marked negro features; they have an ardent disposition for warfare, and whoever wishes to do so can raise armies among them; they profess Islamism here, as do also the Moors, the Wolofs, the Soninkés, the Malinkés, and the Peuls. The latter have thus far been very hostile to the French; they inhabit Futa Jallon, and the banks of the Senegal, above the Wolofs; these shepherds, warriors, and “colons” form a vigorous nation which once rolled down like a torrent on central Soudan, but at present the flood is subsiding. Then follow the Toucouleurs; the Sereres, north of the Gambia; and south of the Gambia a multitude of small, disunited peoples.

Only a few Europeans have pushed their industries and trade into Senegambia. The climate is excessively unhealthful. Yellow fever makes frightful visitations here, and malaria is constantly exhaled from the marshy plains, which are inundated once every year; it is just in this quarter that it was necessary to establish the slave-trading posts and military posts. But the shore from Saint-Louis to Dakar is healthful, as are also the regions about the headwaters of the rios, Futa Jallon, and all the uplands. The European colonies include French Senegambia, English Senegambia, and Portuguese Senegambia.

The chief defence of Senegal—as the French colony is still called, although it has reached the Niger—consists of a chain of forts, which would be powerless except against Negroes unskilled in the use of shot and shell; this cordon, 1025 miles long, starts from Dakar, a port touching Cape Verde; it skirts the coast as far as Saint-Louis, then ascends the Senegal through Dagana, Podor, Salde, Matam, Bakel, Médine, Bafulabe, Badumbe, and Kita (the key of the two Soudans); it descends on the Niger at Bammako, a small village, 1086 feet above sea-level. Including the basin of the Senegal River, the upper Niger, the northern coast as far as Arguin Bank, and the southern coast as far as Sierra Leone, France possesses here about 550,000 square miles; with the dependencies of the Desert and of Soudan in the direction of Timbuktu; the number of inhabitants is entirely unknown. They have been estimated at $1\frac{1}{2}$ million.

Saint-Louis (pop. 20,000), on a low island in the river, is separated from the sea by a narrow bank of sand. Notwithstanding the proximity of the ocean, the annual rainfall does not exceed 17 inches; there are 35 rainy days in the year, and the mean annual temperature is 74.7° F. Saint-Louis is almost as Saharan as Timbuktu. Its proper port is not at the mouth of the Senegal, where thousands and thousands of lives have been lost on the bar, but the budding town of Dakar,¹ founded in 1856, opposite the small island of Gorée. Saint-Louis and Dakar have both railway and telegraphic communications.

¹ A Wolof name, meaning “tamarind-tree.”



THE BARRACKS AT FREETOWN.

English Senegambia is an insignificant colony on the estuary of the miry Gambia; it is a sleepy trading-post, with fewer English than French residing at St. Mary's, Bathurst, and at Albrede, and MacCarthy; it contains 14,150 Negroes on 69 square miles.

Portuguese Senegambia is known officially as Guinea; this Lusitania without Lusitanians lies south of the Casamance, on the estuaries of the São Domingo, of the Geba, and of the Rio Grande. Cacheo, the island of Bissão, and the island of Bulama constitute the principal settlements; there are scarcely 5,000 inhabitants, almost all of whom are Negroes.

Sierra Leone. — Sierra Leone, on a fringed coast near the 9th parallel of latitude, embraces the lower courses of streams which descend from Futa Jallon, with the force imparted to them by a copious rainfall (nearly 18 feet at Freetown, from May to November). The largest of these streams are the Rokelle and the Kamaranka. The civilized settlements occupy as yet only a thousand square miles, with something less than 75,000 inhabitants, of whom 271 are Whites.¹

This Negro colony was founded by the English in 1787. It was to be the hope of the future, the beacon-light of religion, the stronghold of law, and a standard of manners, in an Africa where manners and laws were unknown; but Sierra Leone is a tomb for the white man, and, left to themselves, the Blacks have never displayed any regenerative power. The first settlement was made by 460 American Negroes under the leadership of 60 Whites; the republic welcomed many "loyalists" from Nova Scotia, who remained faithful to England during her struggle against the North American colonies, chestnut-colored Negroes from Jamaica, ebony-skins snatched from slavers by English cruisers, and men from the interior of Africa. From such diverse origins so motley a people has been formed that in Freetown 60 tongues, or *patois*, or possibly 100 to 150, are spoken by the side of the official English. Very few of the Negroes, whether they belong to the 16,000 pagans, or the 5000 Mussulmans, or the 40,000 Christians, engage in the cultivation of the soil; they prefer commerce or trading on a small scale at Freetown, or the liberal professions, the bar, teaching, journalism, or preaching. Nearly all of the autochthonous Negroes are Bagus.

Freetown (pop. 22,000), the capital, with a mean temperature of 80° F., borders the Rokelle at the foot of a volcanic mountain 3000 feet high, which projects as a peninsula into the ocean. This lofty barrier is the source of all the unhealthfulness of Freetown; for it shuts off the breezes from the sea, and it gathers the miasmata of the interior, and suspends them over the town.

Liberia: the Krus. — Liberia lies on the Grain Coast, south-east of Sierra Leone, which it resembles strongly in its physical features. It is a narrow seaboard, traversed by rios that rise to the north-east in the Kong Mountains; these mountains prolong the Futa Jallon in an easterly direction, as far as the gorge of the Niger, below its confluence with the Binue. The climate is the same as that of Sierra Leone, and both countries are unhealthful from the same causes. Moreover, the Black Republic was founded, like Sierra Leone, for the settlement of liberated Negroes; these Negroes were likewise sent from America, for the purpose of propagating the doctrines of Christianity and spreading civilization among the natives. These English-speaking missionaries have done very little in either republic for the regeneration of Africa. Liberia is 33 years younger than the Freetown colony, its earliest² pioneers having arrived from New York in 1820.

¹ The entire colony covers 15,000 with a population of 180,000.

Liberia bears a physical likeness to Guiana. The coast exhibits the same mangrove-swamps with sinuous creeks and sluggish rivers, and the same marshes, 5 or 6 to 10 or 12 miles broad, which are half submerged at high tide and almost completely inundated during the seven months of the rainy season. Back of these lowlands stretch a few savannas, analogous to the *pinotières*, or *pripis*, of Guiana; then the ground rises. In the upland regions, instead of stagnant waters periodically stirred



ON THE LIBERIAN PLATEAU.

by the restless sea, are ever-wakeful torrents, leaping in cataracts in their descent from the plain of the Mandingoes. This plain of the Mandingoes is an undulating plateau, partly wooded and partly in pasture-grounds, extending to the base of the Kong Mountains. Politically and socially, Liberia resembles Hayti, for the laws of the country forbid ownership of the soil by the Whites, and deprive them of every administrative or governmental function. Like China, Liberia closes a part of her ports to the commerce of the world; only six are open to foreign vessels.

The Liberian charter is, then, intended to repel the white man. The Liberian climate proscribes him; although it is not excessively unhealthy, it has an enervat-

ing and undermining effect on the American or the Englishman. The area of the country is fixed at 14,000 square miles (?), with 1,068,000 inhabitants. Of these, 18,000 are civilized Negroes and 1,050,000 half-wild Blacks; among the latter the Krus are a noted tribe. There are few inhabitants on the shore, in the swamps, or on the plain of the Mandingoes; the press of population is chiefly confined to the slopes, along the torrent rapids. The Krus are very black Negroes, with ugly features, but of superb stature and fine physique; they are lithe and strong, but cowardly. They are deeply attached to their country, yet they willingly exile themselves for a few years, in the hope of returning with small savings and spending their declining years in idleness as envied and honored *rentiers*; they are employed largely as sailors, chiefly on English vessels. From time to time small parties of black immigrants arrive from America, thus adding a little strength to the civilized element, and to the English language, which is the official tongue in the country, but which is not spoken fluently except by the American Negroes and their descendants. Paganism prevails in most of the native tribes, and Protestantism among the Liberians properly so-called—that is, among the descendants of the families sent from America.

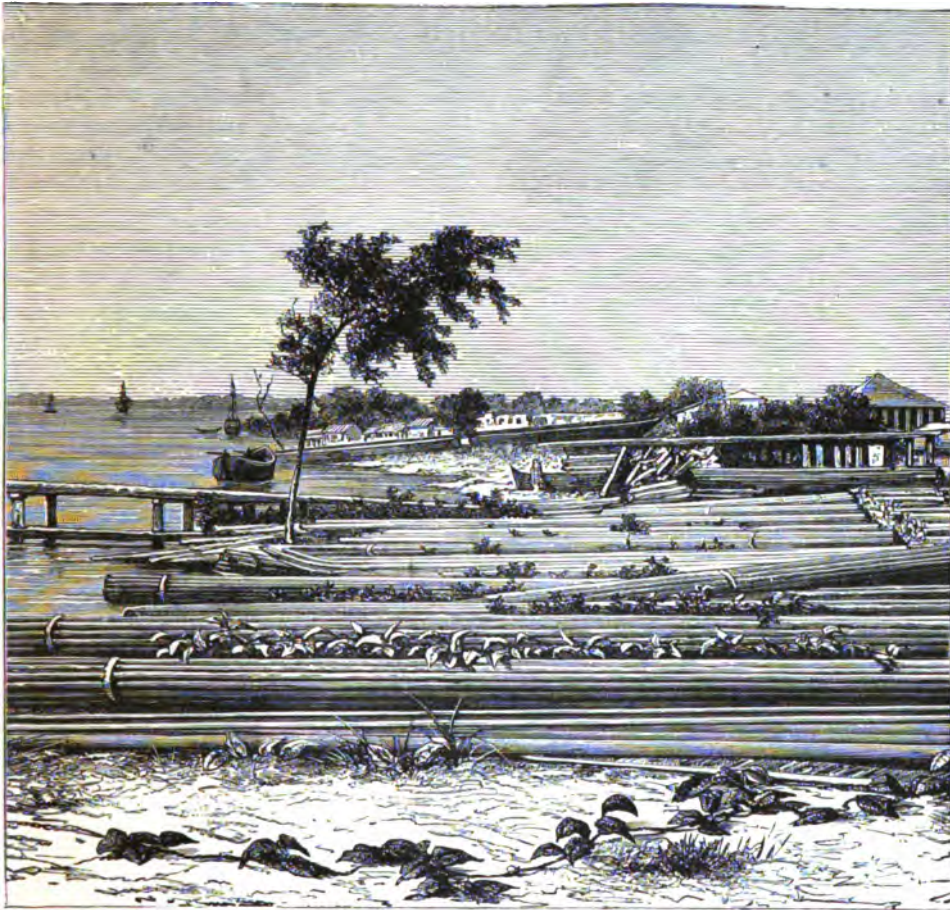
The capital, Monrovia (pop. 3500), situated on Cape Mesurado, is thus named from James Monroe, who was President of the United States at the time of the founding of this oldest of the Liberian cities.

Guinea: Coasts, Climate, Inhabitants.—Sierra Leone and Liberia form a part of the long stretch of coast called Guinea, a name the exact origin of which is unknown.¹ Considering Guinea as extending beyond the delta of the Niger to the Gaboon shore, near the equator, it has a coast-line of about 2100 miles (including the large curves). This seaboard, which at first trends south-easterly, suddenly bends to the eastward at Cape Palmas, and then, beyond the twenty mouths of the Niger, it turns a right angle to the south, enclosing a portion of the sea which is known as the Gulf of Guinea; this is the only place on the African coast where the ocean penetrates far into the land, and here the mouth of the gulf is very broad. Two lesser indentations within the Gulf of Guinea form the Bight of Benin, west of the delta of the Niger, and the Bight of Biafra, east of the delta; the latter stretches at the base of the gigantic volcanic peak of the Cameroons Mountains (13,000 feet), facing the Spanish island of Fernando Po. The Kongs, which are almost unexplored, rise from the ocean to the water-parting between the coast-streams and the River Niger. As they are highest in the north of the country, Guinea is wholly southern, and few districts are more essentially tropical; the most varied and luxurious vegetation adorns the valleys of such streams as the Akba, the Assinie, the Tando, the Pra, the Volta, and the Ogun. These streams are rivers in the lowlands, but in the mountains they are violent and treacherous torrents. Compared with the Niger, they are nothing more than small brooks.

On the shore we get no idea of the opulence of Guinea: sterile sands stretch out in long, straight lines, dominating a low, sandy beach; a chain of lagoons, running parallel to the coast, constitutes the characteristic feature of the Guinea littoral; above the ponds and dunes and breakers hangs a heavy, cloud-laden sky. The soil is, however, capable of producing, in the highest perfection, all the woods of the torrid zone, and all the herbage, flowers, and fruits which thrive best in hot, wet climates.

¹ The name is probably derived from Ginnic, Genna, or Jinnie, a town and kingdom in the Niger district; it appears on a map as early as 1351, though it did not come into general use until the close of the 15th century.—Ed.

To say nothing of the plants of the cool zone, which will, perhaps, be acclimated in the future in the uplands, the vegetable productions of Guinea include palm oil and fruit, cotton, cacao, coffee, sugar-cane, rice, spices, oleaginous, tinctorial, and medicinal plants, gum-trees, palm-trees, fancy woods, cabinet woods, and ship timber. Animal life is not less abundant, though most of the beasts are not useful to man; the elephant, the lion, the leopard, the monkey, the chimpanzee, and huge serpents



LAGOS.

haunt the woods and the savannas; two monsters swim in the streams and lagoons—the square-jawed, good-natured hippopotamus, and the pointed-nosed, sullen crocodile.

Guinea is one of the most unhealthful countries in the world for the white man; it has been called the “cemetery of the Europeans.” The “Aryan,” who has no difficulty in founding nations in hot, dry climates, as in Australia, the Argentine Republic, and among the Boers of the Cape, finds it impossible to adapt himself to damp heat. Even in Guinea he rouses from his torpor when the hot wind from the Desert, known as the Harmattan, prevails.

The names given by traders to different portions of the coast—such as Grain

Coast, Ivory Coast, and Gold Coast—indicate unmistakably that among the products of the Guinea shore are cereals, ivory, and gold-dust. The name Slave Coast recalls the old commerce in black flesh, which made the fortune of so many European or American millionnaires, and the leisure of so many African Negroes. Long, slender, speedy slavers issued from the mangrove-swamps, lagoons, and deltas of this coast, with perfect freedom, during three centuries; and for years after the traffic had been abolished, they craftily crossed the Atlantic, and landed their living cargoes in America, at prices sufficient to balance in the mind of the slave-trader the terror of being caught by cruisers and hanged to the yard-arm. All the European nations took part in this terrible business; the captains of the slavers were recruited among all the peoples of the north and of the south. Since the liberation of the Negroes in the greater part of the colonies, since the War of Secession in the United States, the Cuban revolt, and the emancipation of the slaves in Brazil, the business has ceased.

Guinea is inhabited by Negroes, nearly all of whom are remarkably black; they include the Bagus of Sierra Leone, Mussulman Malinkés from the Upper Senegal and Gambia, Fulahs from the same region, who arrived as warriors preaching Islamism, Krus, Minas, Fantees, Ashantees, Gejees, Ffons, Egbas, Yorubas, Nagos, etc. The Minas, from whom the South American slave-market was largely supplied, are of such athletic proportions that Brazil valued them highly as slaves, at the same time that she feared them as intrepid men born for liberty; they tried oftener than the other Negroes to break the whip of the *tocador*. A multitude of half-breeds, nearly all of whom have more negro than white blood, proclaim the passage of the Europeans over the region—especially of the Portuguese; this latter element is being re-enforced by thousands of Blacks, formerly slaves, who, by an unexpected movement, are flowing back from Brazil; they bring with them words, locutions, and Indianisms of the Brazilian Portuguese, which they are introducing into the Guinea tongue. From Liberia to the extremity of the Congo, far beyond Mossamedes, in Guinea, on the lower Zaire, in Angola, and for a long distance into the interior, the language of Camoens is the *lingoa geral* of Africa. The supremacy of this idiom dates from the explorations, conquests, and colonizations of the little people residing between the Minho and the Algarves littoral; it did service later in the slave-traffic, the agents of which, whether Portuguese or not, made their bargains in Negro Portuguese.

European Trading-Posts.—Beyond Maryland, a strip of coast considered as an annex to the Liberian Republic, the shore is studded with European trading-posts; these are less flourishing than in the old days of slavery. Dabu, Grand Bassam, and Assinie, situated near the 5th parallel of north latitude, between Liberia and the English possessions, belong to France; each has a more or less lax protectorate over the neighboring districts. Five degrees to the eastward, on the Slave Coast, in front of Dahomey, France now possesses several other trading-posts, of more recent origin, namely, the greater of the two Popos, Porto Novo, and Appi or Cotonu.

The English rule extends over certain settlements which are called, as a whole, the Gold Coast; these include about 15,000 square miles, with 400,000 or 450,000 inhabitants; the capital of the colony is Accra. The influence of this town has been very important in Guinea since the Danish and Dutch sold their posts to England, and since the latter defeated the King of the Ashantees, even in Coomassie, his blood-stained capital.

Lagos, east of the trading-posts of the Gold Coast, is a newer, busier, and more

commercial colony, containing 100,000 inhabitants, on 1071 square miles. Lagos, signifying "the lakes," is a Portuguese name, and a very appropriate title for this Negro-Lusitano-English settlement (which has only a few dozen Englishmen by the side of a mass of Mulatto and Black immigrants from Brazil). The entire district is a net-work of rivers, false arms, *marigots*, and lagoons. The river of Lagos empties into the ocean over so dangerous a bar, and with such a surf, that the captains of the slavers were not able to pass more than one skiff in six safely.

The Germans have recently installed themselves near Whydah, in Togo, on a coast strip of about thirty miles, which abounds in littoral ponds. On the east they have the French posts of Agoué, one of the Popos, and Porto Novo; on the west, the English Gold Coast; and behind them, Dahomey.

The Kingdom of Ashantee. — Behind these European shops and warehouses stretch native kingdoms, two of which, the kingdoms of Ashantee and Dahomey, are of sinister fame. Ashantee, on the west of the river Volta, is inhabited by a million vigorous, well formed, prolific Negroes. It lies back of villages inhabited by the Fantees, a people of the Gold Coast, which has allied itself with the English, although speaking nearly the same language as the Ashantees. According to tradition, the Ashantee king is, or was, accustomed to have numbers of his subjects beheaded on fête-days and on noteworthy anniversaries of his life, and on the occurrence of any remarkable event; it is said that 40,000 Ashantees were sacrificed at one funeral ceremony,



A YOUNG DAHOMAN.

and that the soldiers once massacred 10,000 prisoners in a single day. If the king of Dahomey did not exist, the market square of Coomassie would be the most sanguinary spot on earth. To say nothing of grand ceremonies, rejoicings, and anniversaries, one man is (or was) slain by official order every day, except the day of the week on which the king deigned to be born. The faithful battalion of the Kra guards the despot; this is a body of soldiers, spies, and gendarmes, forced to protect the life of the prince through terror of losing their own; they are decapitated as soon as their master expires, and this celebration is one of the most magnificent festivals of Coomassie.

The Ashantees are not wholly devoid of beauty, at least in the dominant class, which seems to be descended from Negroids.

Dahomey.—Dahomey lies east of the Volta; the inhabitants, variously estimated at from 150,000 to 300,000, are subject to a pantocrat as blood-thirsty as the Ashantee ruler himself. His guard is composed of thousands of cruel maidens, black Amazons, who exult in carnage. This king sheds blood to satisfy the demands of religion, law, etiquette, and good society, or out of filial devotion, or love; when father, mother, sister, or favorite departs for the shadowy realm, would he perform the part of a son, brother, husband, or lover, if he allowed the shade to set out alone to meet the other phantoms? When, once each year, the official executioners, the crowd, and even the king engage in beheading thousands of men, the celebration is called the "Great Custom"; when only 20, 50, or 100 are sacrificed, it is called the "Lesser Custom." In the absence of Europeans, Islam, which is entering Guinea with giant strides, will put an end to these atrocities.

Two-thirds of the Dahomans belong to the slave class; the people are in general extremely ugly, with strongly marked Negro features, though noble Negroid countenances are sometimes seen, especially among the Ffons.

In the capital, Abomey, situated in a sterile plain, 60 miles from the coast, at an altitude of 1066 feet, ghastly human heads are to be seen everywhere; they serve as decorations of the palace and the city, and pyramids of skulls appear as religious monuments.—Whydah is the Ajuda of the Portuguese, who have strewn Lusitanian names all over these regions. The city is enveloped by the pestiferous atmosphere bred from a lagoon of black, stagnant water. It is situated two miles and a half from an almost untenable roadstead, which swarms with sharks. Whydah once carried on an extensive trade in slaves.

Yoruba.—A young city is rising among the Egbas, in another despotic kingdom lying east of Dahomey and known as Yorqba. This city, called Abbeokuta, is said to contain 100,000 inhabitants; it is situated on the Ogun, 47 miles from Lagos, at the base of a granite rock 260 feet high. The Egbas are a tribe of the Nagos, a solidly built race, whom the Cubans and Brazilians prized highly for the robust slaves obtained among them. The districts which they inhabit, at the eastern extremity of the Kongs, near the lower Niger, are of exquisite beauty and remarkable fruitfulness; the two or three million inhabitants speak dialects of the Yoruba, one of those languages which are undoubtedly destined to perish, but which the missionaries are keeping alive for a few generations by giving them a written form, by the composition of hymns and psalms, and by translations of the Bible.

Cameroons.—Just beyond the Niger we encounter the Bight of Biafra, with the Spanish Island of Fernando Po and the Cameroons estuary. The name Cameroons is said to be derived from the Portuguese *camarões* (shrimps or prawns), and to have

been bestowed upon these coasts by the early discoverers, from the abundance of the crustacea. The term is properly written *Kamerun* now, for the settlement of the Germans here has imposed upon the river the German form of the name. The estuary is in a torrid region, with tropical vegetation along the banks of the rivers; these streams rise in some unknown interior district, and descend through valleys that may, in the near future, serve as highways to central Africa. Above the estuary, the *Mongo-ma-Loba*, or *Mountain of the Sky*, still called the *Peak of Cameroons* (13,000 feet),¹ is enthroned in glory and majesty.

South of the Cameroons estuary stretch coast districts where France, Spain, and Germany have confused claims to suzerainty. Back from the shores rises the *Serra do Cristal*. Then follow the Spanish Bay of *Corisco*, and, immediately beyond, *Gaboon*, a large French colonial establishment which reaches the Congo.

THE CONGO COUNTRIES.

The Great Congo River; its Lakes and Waterfalls.—The Congo River has a length of 2600 miles; admitting (what is quite probable) that it receives the still mysterious *Wellé*,² it carries to the sea the tribute of a basin of 1,235,000 square miles, or about nineteen times the area of New England; this basin is visited by powerful rains, and vast tracts of it consist of swampy, spongy plains; the mighty lakes, the extensive forests, and a wet season as long as, and in some regions longer than, the dry season, give the Congo, it is estimated, a low-water volume almost equal, if not superior, to that of the Amazon. There has doubtless been much exaggeration in regard to the size of this river; but, in any case, it surpasses every other African stream in volume.

The Congo begins with the *Chambeze*, which is supposed to rise at an altitude of 5446 feet, south-east of *Lake Tanganyika*. The *Chambeze* flows over plateaus where the clouds of the *massika** burst in storms; it runs south-westerly, in the direction of the *Zambeze*, to *Lake Bemba*, or *Bangweolo*. This melancholy lake receives the *Chambeze* on the east, across vast thickets of reeds, and it discharges it on the south-west, through a forest of gigantic rushes; enclosed by flat shores, its girdle is a belt of marshes; and every *massika*, glutting the torrents with alluvium, increases the area of the marsh, and diminishes that of the water. At present, the length of the lake is about 110 miles, and its width from 30 to 50; it has an area of about 4000 square miles, and lies at an altitude of over 4250 feet.

The river issuing from this miry lake is called the *Luapula*; at first, it moves lazily over a soft bed, and between the muddy tracts which prolong the marsh encirc-

¹ The estimates vary, reaching even 13,746.

² The course of the *Wellé-Makua* has now been determined (April, 1888). About four years ago, Dr. Junker reached a settlement on the river in latitude 3° 13' 10" N., and longitude 22° 47' 40" E. In 1884-1885, Grenfell followed the *Mobangi*—the great Congo tributary which the Belgian geographer, Wauters, conceived to be the lower course of the *Wellé*—to a point only a little over 200 miles from Junker's farthest station on the latter stream. Lieutenant Van Gele has now pushed along the *Mobangi* as far as longitude 22° E., thus practically connecting Junker's explorations with Grenfell's, and demonstrating the correctness of Wauters's hypothesis.—ED.

* The rainy season.

ling Lake Bemba; but ere long it is rumbling over stones and between rocks; veering to the north, it breaks in the cataract of Mombottuta, which is succeeded by other cataracts; then, with a breadth of 300, 500, or 600 feet, it once more enters a lake,—this time, the Mweru Mkata, a smaller sheet than Bangweolo, but much more beautiful; Lake Mweru is estimated to have a length of 90 miles, a breadth of 30 to 40 or 45, and an area of 3100 to 3500 square miles; it is situated about 2800 feet above sea-level, or about 1450 feet below Lake Bemba.

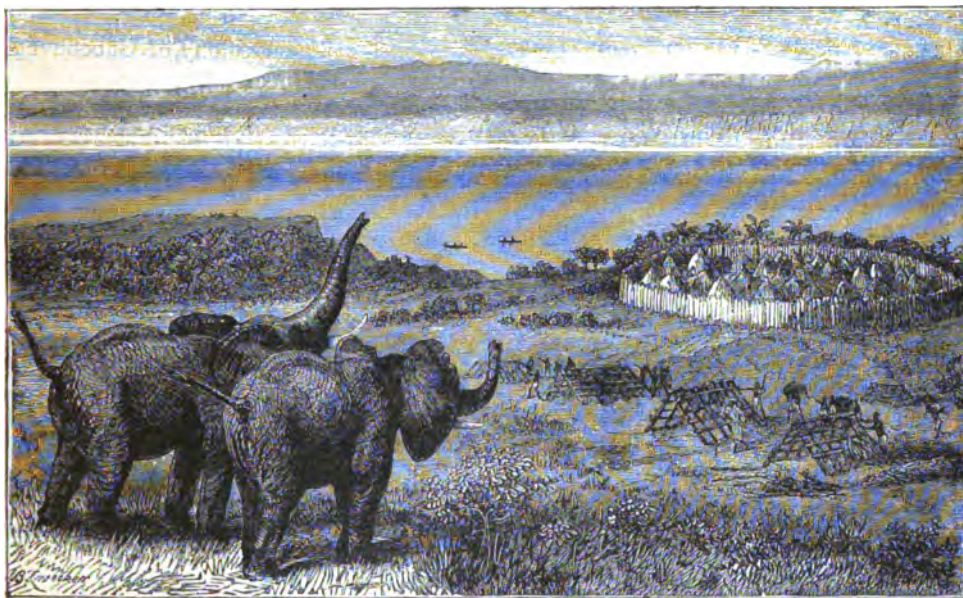
The stream flows out of Mweru under the name of the Luvua and moves north-westerly toward a river seemingly longer and stronger than itself, and which, it is said, traverses eight lakes—among others, Upaemba and Kassali. This latter river runs in a north-easterly direction, west of the Luapula; it is called the Lualaba. The majestic stream of water formed of the Luvua and the Lualaba retains the latter name; it soon encounters the Lukuga. The Lukuga is likewise a lake-outlet, but it is intermittent, and does not always discharge the waters of the great basin, or, we might almost say, the small sea, whose outlet it is. When a series of very wet years has swollen Tanganyika—for thus this lake of 12,140 square miles is named,—the Lukuga flows off toward the west, deep and broad; but when a succession of dry years lowers the level of the water, the emissary stops in its course behind a jungle of reeds and aquatic plants, and the Lualaba pursues its way toward the equator without receiving anything from Lake Tanganyika.

Lake Tanganyika has a length of 328 miles, a breadth of 14 to 47, a circuit of nearly 900, and depths of 2000 feet; it is 2560 feet above ocean-level; the rugged mountains encircling it rise to altitudes of 3000 or 4000 feet. Its most powerful affluent, the Malagarazi, rises in Unyamwezi, or the "Country of the Moon," a name which recalls the Mountains of the Moon, which were said by the ancients to hide the sacred source of the Nile. It is supposed that the Lukuga and the Lualaba unite in a third expanse of water, known as Lake Lanji. At Nyangwe (2034 feet) the river is stirred in rapids, and then follow the seven Stanley Falls. Beyond this point the Congo crosses the equator and flows north-west to 2° N., dispersed among islands, with a breadth of 2 to 3 miles, and of 4 to 7 or 8 during the freshets. Then it turns south-west, keeping this direction until it reaches the Atlantic; it receives powerful streams without seeming to increase in volume; these streams, which are very differently colored from itself, retain their own hues for a long distance. Such are, between the Stanley Falls and the series of cataracts by which the river descends into the lowland, on the right bank, the Aruwimi or Biyerre, the Itimbiri, the Ngala, the Mobangi, and, lastly, the Licona and the Alima;¹ on the left bank, the Lubilash, the Lulungu, which is possibly the Kassai² from the Mwata Yamvo's kingdom, the Ruki (1180 miles), whose waters, Stanley says, retain their dark tea-color in the bed of the Congo for 125 miles (?), and the Kwa, the very powerful river formed from the Kwango and the Mfini, the latter issuing from Lake Leopold II.

¹ Within a short time another great navigable tributary of the Congo has been discovered; it joins the stream on the right bank, at a point between the Mobangi and the Licona. It is called the Sekoli, and is known by different names in different parts of its course. It flows at first in a direction from west to east, and then bends southward. Below the equator its southerly course becomes more decided. About the equator it receives on its right bank a considerable tributary, the Ambili. The Sekoli is between 1600 and 2000 feet broad, and has many islands. At its confluence with the Congo there is a great delta, almost opposite the former station of Lukolela.—*Ed.*

² Wissmann's expedition (1883-87) settled the question of the Kassai's course. It receives the Lomani, Sankuru, and Kwango, and with the Mfini forms the Congo tributary known as the Kwa.—*Ed.*

Before precipitating itself to the coast, from gorge to gorge, the Congo expands into a lake, called Stanley Pool, which has a length of 25 miles, with a breadth of 16; it is situated 1150 feet above sea-level, and contains 17 islands; at its outlet are two settlements which are destined to become cities in the future: on the left bank, Leopoldville; on the right bank, the French post of Brazzaville. The Congo is soon dashing between schists which rise abruptly, overlooking the thread of the waters at an elevation of 400 to 820 feet. With a breadth of 2950 to 7550, and again of only 1300 to 2600, and with a depth of from 130 to 330, the stream descends in these tortuous passes 1030 feet in less than 200 miles, by 32 falls and numerous rapids: the loftiest of the cataracts, the Yellala Falls, is only 15 feet high. Beyond Vivi, the Congo broadens out again. It is 10,500 feet wide at Boma, and it is with a breadth of 33,000 feet that it empties into



LAKE TANGANYIKA.

the ocean, under the sixth parallel. Its sombre brown flood stains the waters of the sea for a hundred miles; the discharge, in the dry season has been estimated at 2,500,000 to 2,800,000 cubic feet; the water of the Atlantic opposite the embouchure is fresh 14 miles out from the coast (?) and brackish at a distance of 40 miles.

The Congo Free State.—The Congo Free State has grown out of discoveries made by Henry M. Stanley, and the subsequent explorations conducted under the auspices of an International Association founded at Brussels in 1876, under the presidency of the King of the Belgians. During 1884 and 1885 the State received recognition from all the great European Powers and from the United States, conditional upon the maintenance of the principles of absolute free trade. This is the first attempt at the establishment of an international State.

From Lake Bangweolo to the unexplored water-parting which divides the basin of the Congo from the basins of the Nile, Lake Chad, and the Niger, from Tanganyika to the mouth of the river, the King of the Belgians is patron of a state which possesses

more unexplored territory than any other in the world; the exact extent of this domain is unknown; it is placed by some at 800,000 square miles, by others at a million. As for the inhabitants, Wagner estimates them at 14 million. This portion of Africa is occupied by countless black or Negroid peoples, by multitudes of small tribes, sometimes combined into vast kingdoms or empires, such as those of the Kasembe and the Mwata Yamvo.¹ Will this free, international, and fraternal State penetrate into these nations without plundering them?

FRENCH CONGO.

The African West. — The neglected and almost abandoned colony of Gaboon has become of incalculable value to the French since it was connected to the right bank of the Congo, by a series of posts established on the river Ogowai and other rivers, the largest of which are the Licona and the Alima. Exclusive of the regions in the north disputed by Germany or Spain, the African West² borders the ocean from the first parallel north latitude to the fifth south latitude, or along 450 to 500 miles of coast (not including the lesser indentations). From its southern limit, at the embouchure of the Chiloango on the coast of Loango, it is separated from the Congo Free State by an undulating line, which reaches the Congo over mountains and through valleys, above Manyanga. From this point the Congo itself forms the boundary line for more than 350 miles, almost to the equator, the right bank being French and the left belonging to the international State. The northern frontiers of the colony are not yet fixed; in any case, they will include the basin of the Licona. The African West comprises, according to the position of the northern boundary line, at the minimum, 174,000 square miles, at the maximum, about 250,000.

The Gaboon. — The Ogowai. — The Gaboon estuary is without rival on the western coast of Africa; its Como and Rhamboé are abundant rivers owing to the excessively rainy climate, but they rise scarcely 60 miles to the eastward, in the Crystal Mountains (2600 to 4600 feet). Though the Como and the Rhamboé are unimportant, the Ogowai, which flows back of their sources, on the other slope of the Crystal Mountains, passes as a gigantic stream into the plain, which it inundates regularly; it issues from plateaus where persistent snows are impossible, in this equatorial zone, on account of their low altitude, — 2600 feet at the most; but the greater and lesser rainy seasons evoke mighty rivers here. The Ogowai is 500 or possibly 600 miles long. It receives on either bank such long and broad tributaries that its drainage area is estimated at 116,000 square miles(?); these branches, as well as the Ogowai itself, fluctuate greatly according to the dryness or wetness of the season. After receiving all its affluents, it has a breadth of 5000, 6500, or 7500 feet, and it soon divides in a delta, the most northern branch of which empties into the ocean 110 miles from the most southern, — one north, the other south of Cape Lopez.

The Kwilu-Niadi, a large stream, though smaller than the Ogowai, empties into

¹ During the past year (1886), Captain H. de Carvalho has reached the residence of the Mwata Yamvo, and has induced him to place his empire under Portuguese protection. — Ed.

² This is the name proposed for the colony.



PORTAGE AROUND THE HOWAL FALLS, ON THE OGOWAL

the sea on the coast of Loango; it rises somewhere on the plateau of the right bank of the Congo, north-west of Brazzaville and Stanley Pool. With a length of 300 to 375 miles, it forms even a better route than the Ogowai to the Congo, at the point where the latter broadens out and is so studded with islands that on a map they look like the scales on the shield of the crocodile. The French rivers back of the Ogowai and the Kwilu, running toward the Congo, are, from north to south, the Licona, the Alima, the Mpaka, the Lufini, and the Jue. The largest is the almost unexplored Licona. The Alima, the second in size, originates, like the Ogowai, on a barren



A GABONESE VILLAGE.

plateau, a species of sandy, though healthful steppe, inhabited by the Bateke; then, in the country of the Bafurus, it rolls over sands, between shores 500 to 1000 feet apart, deep and limpid, though turbid during the rainy season.

Settlements.— Tribes — Within its scarcely traceable frontiers, the French colony comprises the settlement of Libreville, on the north-eastern bank of the Gaboon estuary; the coast posts from Cape Lopez to Punta Negra; those of the Ogowai, the Kwilu, and the Alima, and the huts of Brazzaville. The French have been more fortunate here than on the Senegal. It is now less than 40 years since the occupation of the estuary, and they have nevertheless gained without bloodshed plateaus where it is possible for the white man to thrive. The native tribes include the Mpongwa or Gabonese, the Okandas, the Pahuins or Fans, and the Bateke and Bafurus of the

Congo slope. The Negroes among whom the colony originated, the Mpongwa, are a branch of the great Bantu tree, which overshadows all southern Africa, and of which the Kafirs are the most celebrated branch; their language is making conquests among neighboring tribes, but the race itself is falling back before the Pahuins; the latter came from the north-east, but how or when, no one knows.

ANGOLA, OR PORTUGUESE CONGO.

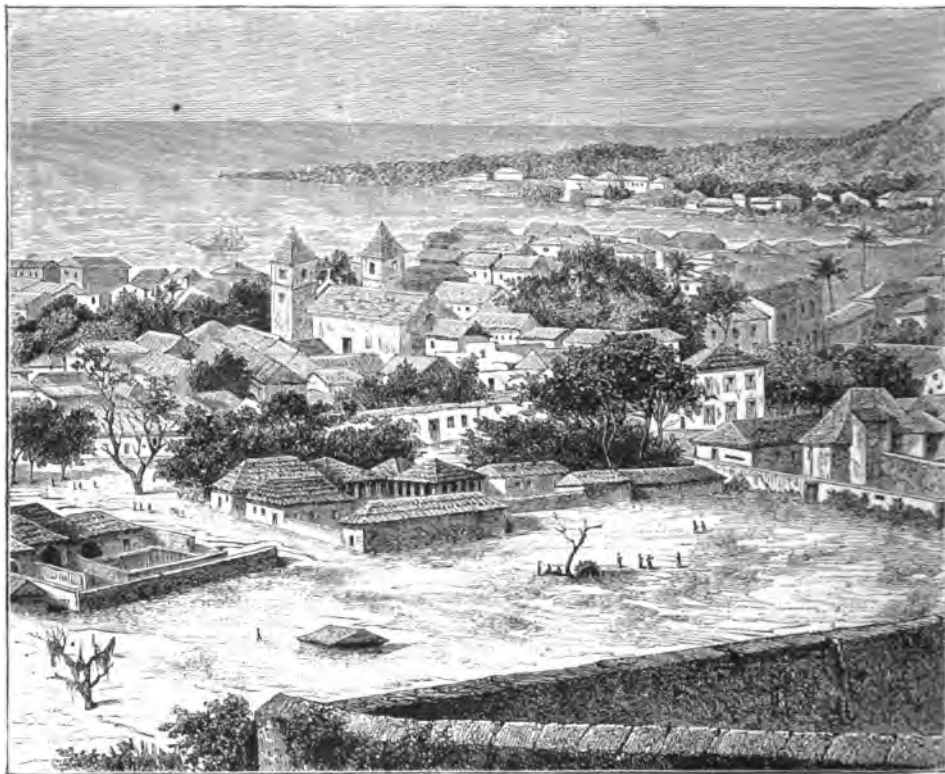
Kabinda. — It is beyond the Chiloango that Loango becomes Portuguese territory, but the Lusitanian tongue is heard in the French as well as in the Portuguese district. A large number of the Negroes understand this idiom, which was formerly the language of the slave-merchants, and has remained that of commerce in the countries near the embouchure of the Congo. By the act constituting the Congo Free State, Lusitanian Loango was restricted to the narrow seaboard of Kabinda. It is pressed upon on the east by the Congo State; the latter, likewise, bounds it on the south, separating it from the gigantic stream by scarcely a day's journey. Beyond the Congo the Portuguese territory begins again. This strange dismemberment of the Lusitanian domain was made for the purpose of giving the international State access to the sea, which it fronts along twenty to twenty-five miles.

Angola. — Ten years before a Portuguese vessel had doubled the Cape of Good Hope and furrowed the sea out of which the fabled Adamastor rose, Diego Cam, a Lusitanian admiral, had explored the delta of the Congo, a stream which the natives called the Moienzi-Nzaddi, the "Powerful Water"; he had established relations with Ambasse, the capital of the mighty kingdom of the Congo. In 1509, thirty-five Christians, aided, says the legend, by an angelic host of cavalry, under the command of Saint James, destroyed a countless army of pagans. Three years later, Dom Affonso I., a fervent Catholic, sent an embassy to the king of Portugal bearing the autograph letter on which the Portuguese long based their claims to the entire Kingdom of Congo; he welcomed great numbers of Europeans to his capital, which had adopted the name of São Salvador; he aided his friends, the Dominicans, in building a beautiful city, twelve large stone churches, convents, seminaries, and palaces. Those days of splendor vanished, churches and palaces crumbled with the empire whose strength and glory they had been; lofty palm-trees grew up on their ruins, and ere long the Kingdom of Congo had become hunting-grounds where men were tracked to supply slaves for the diamond mines and fazendas of São Paulo, Minas-Geraes, and Goyaz; the Portuguese gradually ceased to make conquests along the coasts and on the plateaus, then they began to retreat, and to-day São Salvador is nothing more than a Negro village of a hundred straw-thatched huts.

Portuguese Congo comprises three physical regions, namely: on the Atlantic, a littoral 60 to 90 miles broad; then uplands 15 or 20 leagues across; and, on the mountains, 100 or 125 miles from the coast, the plateau, or, in Portuguese terms, the *sertão*, that is, the more or less wooded, more or less wild interior.

The coast from the Congo to Cape Frio, the southern limit of Angola, is desolate and sandy, and destitute of all verdure except the *capim* and a few burnt trees. The

rainfall here is insufficient,¹ and there is no freshness away from the banks of such rivers as the Lelundo, the Ambrizette, the Loge, the Dande, the Bengo, the Coanza, the Longa, the Cuvo, etc. The strongest of these rivers, all of which descend noisily from the serras, is the Coanza; it rises far in the interior, on the plateaus of Bihe (5578 feet); its native glen, the future home of multitudes of Portuguese, is cool, but its lower plain, below the falls of Dondo, is stifling and deadly. Not far from Dondo, 140 miles from its mouth, the stream drops from 70 to 80 feet; its breadth at this point is about a quarter of a mile. It transmits to the sea the waters of about



ST. PAUL DE LOANDA.

116,000 square miles. Other streams originate on the same plateau with the Coanza, some of which flow off northward to the Congo through the Kwango, some eastward to the Zambeze, and others southward to the Cubango and the Cunene. The eastern boundaries of Portuguese Congo are undefined; its exact area is therefore unknown, as also is the number of the inhabitants. It comprises perhaps 400,000 square miles, with a population of possibly 2½ million, consisting of a few thousand Whites, with cross-breeds of all degrees of mixture, and Lusitanianizing natives in unknown proportions.

The capital, São Paulo de Loanda, is a rather pleasant town, lying on the shore of a bay; it contains 15,000 inhabitants; among these, 3000 or 4000 are Whites, many

¹ At São Paulo de Loanda it is sometimes only 5½ inches yearly, and again it reaches 22½.

of whom are convicts, Loanda being one of the presidios for the deportation of Portuguese criminals. The unhealthfulness of Saint Paul has been greatly exaggerated; however, Whites cannot live here during February, March, and April, while the dysentery epidemic known as *carneirada* prevails. The minimum temperature is 56° F., the maximum 89°.

Mossamedes, on the southern coast, where almost no rain falls, can boast of a climate well suited to the Whites.

LUDERITZLAND.¹

The Atlantic coast, between the Portuguese of Mossamedes and the Dutch and English of the Cape of Good Hope, that is, from Cape Frio to the Orange River, was unclaimed territory, which no one paid any heed to, but which was supposed to belong to the English. Germany has recently established herself here, not with the object of renewing the German race or building up its fortunes, for the country is a steppe, or a desert, stretching along a brazen shore, and sending neither stream, brook, nor fountain to the sea. Rains are rare, and the dryness is hopeless, for even the scant rainfall is steadily diminishing. The Germans have taken a foothold on this naked, thirsty shore with a view of making inroads, if possible, into the Dutch and English territory of the Cape, and of moving north-easterly and penetrating into central Africa by passing to the east of the Portuguese colonies. At present, Luderitzland's only source of revenue consists in its mines of various metals, particularly of copper, the little barter carried on with the Namaqua and Damara shepherds of the back country, a few pasture-grounds here and there, and the excellent port of Angra Pequena, the capital.

THE CAPE COLONIES.

The Dutch and English colonies occupy the southern portion of Africa in four states, namely: Cape Colony and its dependencies, Natal, the Orange Free State, and the Transvaal, or the South African Republic. Cape Colony and Natal belong to England; the Orange Free State and the Transvaal are independent.

Fully two-thirds of the Whites of southern Africa are Dutch. Out of 370,000 to 380,000 Europeans, nearly 250,000 can be counted as Hollanders, and less than 130,000 as English.² The Dutch language has made greater progress than the English among Negroes, Negroids, Mulattoes, and Malays, among the Hottentots, the various Kafir nations, and the Bastards; lastly, — and this is its strength rather than weakness, — Dutch has the supremacy in the country. English predominates in

¹ So called from Luderitz, a German, who, having acquired possession of certain points on the coast, asked protection from Germany.

² According to a document which places the Whites of Cape Colony at the high figures of 492,000 the Dutch number 330,000 and the English 162,000.

the cities. The Dutch are known here as Boers, a very appropriate name, signifying peasants. In classical Dutch, the form of the word would be *Boeren*. The final *s* in *Boers*, and the double negative corresponding to the French *ne pas*, are almost the only traces left in the South African Nederduitsch by the French Calvinists, who nearly doubled the Hollandish colony at the close of the seventeenth century.

CAPE COLONY AND DEPENDENCIES.

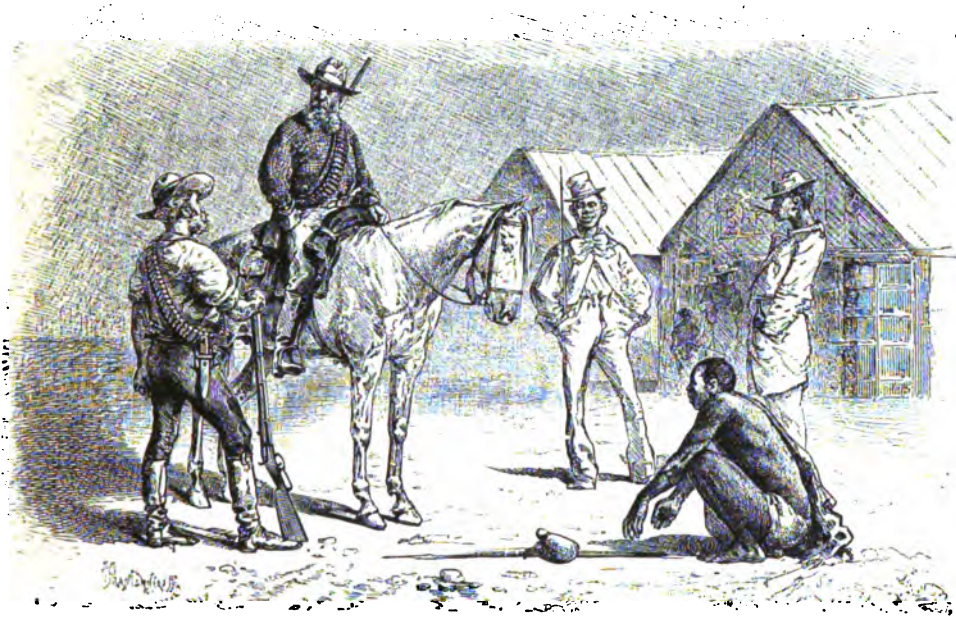
Difficult Coasts. — Dry Mountains and Plateaus. — Cape Colony was originally a Dutch settlement, but it was easily captured by the English during the wars of the Republic and the Empire, and retained by them on the conclusion of peace in 1815. It has made great advances in Africa during the last fifty years. The Boers have pushed northward, followed by their immense herds. At the same time the monstrous army of wild beasts has retreated. When the Dutch began the settlement of the Cape, in 1652, the entire southern extremity of the continent swarmed with rhinoceroses, elephants, hippopotamuses, lions and giraffes, and lithe gazelles. But these have fallen back at the approach of man.

Including dependencies, Cape Colony embraces nearly 252,000 square miles, with 1,526,000 inhabitants. Natal, the Dutch Republics, and the recent extensive annexation of the Bechuana country, are not comprised in this estimate. The famous promontory of South Africa has a better title to the name "Cape of the Tempests," which was bestowed upon it by the Portuguese discoverer, Bartholomew Diaz, than to that of Cape of Good Hope, given later by an enthusiastic monarch (John II. of Portugal). Nearly all the harbors are badly shaped and of dangerous approach, and the coast is even inhospitable in the vicinity of the extreme southern point, off which the waters from the Atlantic and the Indian Ocean meet in waves 50 to 60 feet high, and where fields of ice from the Antarctic seas are sometimes encountered.

Back from this harborless shore (*mare importuosum*), as Sallust says of the Numidian coast, stretch tracts of land, for the most part arid, and variegated with heaths of many-colored flowers, with whitish shrubs scorched by the sun, and with mimosas where the secretary-bird lies in wait for serpents. The surface is cut by defiles (*poorts*) and rugged gorges (*kloofs*), through which a storm will precipitate in a few hours a huge transient torrent. Most of the rivers terminate before reaching the sea or the Orange River, leaving nothing but putrid lagoons of tepid mud; these lagoons constitute the only water resource of the country when the torrid sky evaporates the fountains. With perennial streams, the fields of the Cape would produce marvellously. Cape Colony is unrivalled for the diversity of its flora.

The land rises from the sea by a series of terraces, the supporting walls of which are mountains of granite, sandstone, and schist. The dry plateaus of these terraces are called *karroos*, from a Hottentot word adopted by the Dutch. The coastal chain, known under various names, follows the 34th parallel of latitude quite closely, at a distance of 15, 30, or even 50 miles from the ocean, with elevations of 3300, 5000, or 5300 feet. The famous Table Mountain rises directly over Cape Town to a height of

3550 feet. Back of this outer talus are small karroos, the temporary torrents from which flow to the coast streams, cutting through the littoral uplands. On the north, these karroos come in contact with the Zwarte Berge, or Black Mountains (6500 to 8200 feet), from whose summits the Great Karroo can be seen stretching away to the northward with a mean elevation of 2600 feet, and prolonged on the north-west by the Bokkeveld Karroo. The baked red clay of the Karroo is almost never wet by the rains. This more than rugged country resembles the Algerian steppes. The lion once roamed here, hunting the gnu, the giraffe, and the gazelle, but his roar is no longer heard around the wagons of the "trekking" Boers. When the springs, the running water, and even the putrid marshes of the plateaus have dried up, when the pasturage has become parched, and the dull blue of the sky gives no prophecy of rain, the Boer



BOERS AND KAFIRS.

yokes his oxen (sometimes as many as seven pairs) to his family cart or wagon, and sets off in search of grass and water. In Afrikander Dutch this migratory movement is known as "trekking."

The Orange River. — At the northern extremity of the Karroo rises the Nieuweveld Range, or Snow Mountains. The Compass (8500 feet) is said to be the loftiest boss of this chain, which bears various local names. Behind the Nieuweveld stretches the boundless plain of the Orange River, 3300 to 5300 feet above sea-level. The plain is covered with grass whenever it rains, — but few clouds scale the Nieuweveld or the Zwarte Berge. Except in the months of September and October, the Orange plateau is uniformly gray and burnt; vegetable as well as animal life languishes around the dry fountains and along the waterless torrent-beds; man escapes, in a measure, from the flaming sun of day and the stifling heat of night by fleeing with his herd to springs higher up in the mountains, or by moving down to the banks of the river, which is never wholly destitute of water.

The Orange is formed by the confluence of the Black Garib, or Orange, and the Yellow Garib, or Vaal, both rising in the Maluti Mountains. This quintuple or sextuple chain is much loftier than it appears to be, for it reaches altitudes of 11,500 feet, and possibly 13,000,—between the interior plateau and the shore of the Indian Ocean. Although its sources are very near the eastern sea, the Orange traverses Africa and empties into the Atlantic after a course of 1155 miles; it drains an area of over 400,000 square miles. Along all the headwaters there is life and activity, with towns and villages inhabited by Whites, with native kraals and huts, with cultivated fields, with meadows, and immense herds; but immediately beyond the junction of the two parent branches the river enters the dry southern Sahara. The turbid, unwholesome waters, imprisoned at the bottom of ravines several hundred yards in depth, are almost useless for irrigating purposes. Even if means could be devised for raising the entire stream to the surface of the plateau, if the low-water flow could be increased tenfold or a hundredfold by storage reservoirs, life could be imparted to only a small portion of this doomed desert. Everywhere,—among the Boers of the extreme frontier, among the Bechuanas of the great Bantu race, and among the various Hottentot tribes,—everywhere springs are becoming dry, rivers are disappearing, and the zone of tropically regular rains is moving yearly from west to east. The same thing is true of the entire district as far as the uplands along the Cunene, the Cubango, and the upper Zambeze.

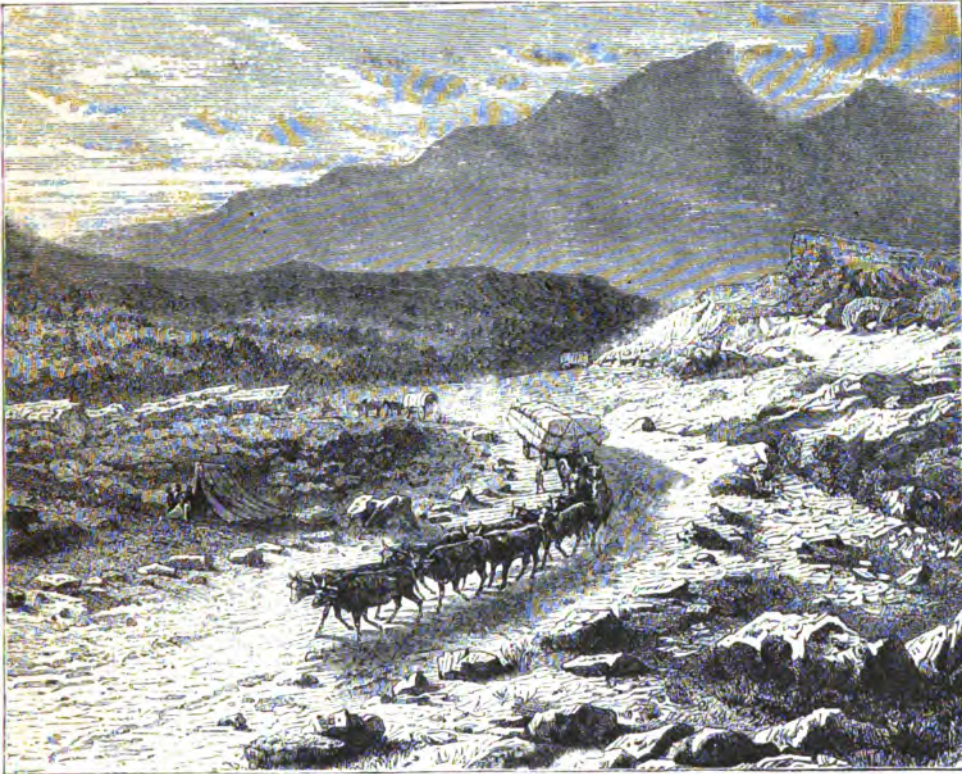
The Orange abounds in rapids, nearly all of which are obliterated during the yearly freshets in January, February, March, and sometimes April: at these seasons the Great Waterfall of Aukurubies (150 feet) is very imposing.

Kaffraria. — Basuto Land. — Griqualand. — Kaffraria is far superior to the Sahara of the Hottentots or even to the most favored lands along the southern shore. The life of Kaffraria is dependent upon the death of this Sahara. The mountains, 6500 to 13,000 feet high, which bar the horizon on the west and north-west, attract the vapors from the Indian Ocean; the moisture-bearing clouds nearly all break on the eastern slope, giving rise to countless charming rivers, brooks, and rills, waterfalls and cascades; but very little rain scales the crest to supply the fluctuating torrents of the Orange basin. The Kafir shore begins beyond the promontories of Port Elizabeth, at the point where the Cape coast bends to the north-east; although it is very wet, this littoral is healthful, owing to the steep incline of the surface; but, in measure as the equator is neared, the increasing heat renders cultivation of the soil by the Whites impossible. In the portion of Kafirland comprised in the independent state of Natal, recourse for tillage is had to the Kafirs, to various black tribes, and to the coolies of India and China. Beyond the confines of Natal, in Zululand, the genuinely tropical zone is reached. Kaffraria has been lately annexed to Cape Colony; it embraces about 20,000 square miles, and contains at least 500,000 inhabitants.

Basuto Land, formerly under Cape rule, lies west of the Kafir mountains. It comprises about 10,000 square miles. The 175,000 inhabitants live at the base of peaks that are capped with snow for a few weeks each year, or on lofty grazing-grounds, or on table-shaped mountains, near torrents which flow to the Orange or the Caledon. The name of the country is derived from a branch of the Bechuanas, a people belonging to the same immense Bantu race with the Kafirs. The Basutos once occupied the high plain comprised in the Orange Free State; trodden under foot by the Boers in the eastern uplands, they have accepted British suzerainty. The singular of the word Basutos is Mosuto; they call their country Lesuto, and their rich, poetic, energetic, and

resonant tongue, Sesuto.¹ A few thousand Basutos have been converted to Protestantism through the labors of French missionaries, and several of their villages are built around stations bearing such Biblical names as Bethesda, Moriah, Berea, Hermon, Beersheba, and Carmel. Many of the Basutos speak Dutch or English, but the masses have remained pagans, and make use of the Bantu language.

Griqualand West, a newly acquired district, is much drier and more sterile than Basuto Land. It is much richer also, but its wealth, being in diamonds, has a fictitious character. The country has a slight resource against the aridity of the soil, for the



COMING FROM THE DIAMOND MINES.

Orange and the Vaal, which can be drawn off by irrigating canals, unite in the lofty Griqua plain. The chief town is Kimberley, situated 4400 feet above sea-level.

The Griqua plain was uninhabited except by a few families of Boers, whose

¹ The language of the Basutos and of all the other branches of the Bechuana family is generally known under the name of Sechuana. In origin and structure it is identical with the Kafir tongue, though in vocabulary the two idioms differ as widely as do Spanish and French. In the Basuto language the prefixes possess, among other peculiar properties, that of modifying and extending the signification of the radical. The radical *tu*, for example, conveys the general idea of "man"; by prefixing to this the syllable *mo*, we have *motu*, the individual man, while *botu* signifies humanity, *setu*, the language of man, and *letu*, the habitation of man, the world. The root, *suto* means the "people" as a whole; a *Mosuto*, then, would be an individual of this people, *Lesuto* would be their country, and *Sesuto* their language. — ED.

"trekking" had insensibly united it to the Orange Free State, and some thousands of Griqua Bastards, or Dutch and Hottentot half-castes, of Netherlandish speech. Suddenly diamonds were discovered. The English crossed the Orange and annexed Griqualand, thus acquiring 17,800 square miles of territory and 83,000 inhabitants. The greater part of these are Boers; then follow the English, the Griquas, the Kafir diggers and miners, besides a multitude of cosmopolites.

The Boers and the English.—Hottentots and Kafirs.—This healthful, strongly framed country has two sources of revenue, wool and grain; profit is also drawn by the colonists from the ostrich; these birds are penned, fed, and cared for by the thousands and tens of thousands for their plumes.

Cape Colony, Kaffraria, Griqualand, and Lesuto, together, form a block of 241,572 square miles, with 1,700,000 inhabitants, of whom probably 375,000 to 380,000 are Whites and more than 1,300,000 Blacks and Coppers. Two-thirds of the Whites are Dutch; the other third is composed of Englishmen, Germans, Norwegians, Swiss, etc.: that is, there are 250,000 to 260,000 Boers, and over 100,000 of other races. The Boers, or Afrikanders, are of double origin. The early foundations of the nation were laid slowly (beginning with 1650) by Dutch seamen, soldiers, functionaries, traffickers, adventurers, and outcasts, who embarked for the colony, or stopped there on their way to India, Ceylon, or the Spice Islands. Then, in 1687, French Calvinists arrived, fleeing from different parts of France before the troops of Louis XIV., after the revocation of the Edict of Nantes. Only 200 families, or perhaps 300, came; but the Dutch settlement was still so weak that a third, if not a half, of the Boers, are descendants of these 1000 to 1500 persons. De Villiers, Joubert, Du Toit, Béranger, Leclerc, Roux, Bruin, Plessis, and a hundred other names not less French in form, are met with in all the South African villages. The men bearing these names have inherited nothing from their ancestry except the bigotry of Calvinism; they chant the Psalms now not in French, but in Afrikander Dutch. Race fusion and climatic influences have given them the "sanctimoniously crafty" expression of the austral Netherlander, but they are of shorter stature, less athletic in build, and less obese, and more black-haired, black-eyed individuals are to be seen among them than among the families which came from the dunes and polders of the Rhenish delta.

The accession of the French Calvinists not only doubled the nation of the Cape, but gave it a higher moral tone. Down to the date of their arrival, the Dutch had been widely dispersed and without any cohesion; there were no genuine peasants among them, but this element was supplied by the French. The French also brought with them the vine, which others of their nation are planting to-day, two hundred years later, at the opposite extremity of Africa. They have remained Protestants, but they have little in common with the French nation of the present time; their language was officially prohibited after 1709, in 1725 it ceased to be used in preaching, and in 1750 it had wholly disappeared.

Later, the people composed of these two elements (to say nothing of native blood, for white women were long very rare at the Cape) was augmented by the arrival of Germans, Frieslanders, and Danes. The Boer descendants of these various races are of stalwart proportions. The women are large-framed and obese, with no delicacy of complexion, and wholly devoid of beauty; they are often of colossal stature. The dryness of their plateaus, through their custom of "trekking," has forced the Boers into the half-nomad state. Their literal Calvinism has made them somewhat narrow-minded. Not having been re-enforced since their separation from Holland by homo-

geneous elements, which would have kept them in the current of the age, they live lazily in isolated farm-houses; these unclean, desolate, malodorous clay dwellings are always built as near as possible to a pool of water. "Trekking," visits from farm to farm, long siestas, the pipe, the sermon, theological discussions, the reading of the Bible and a few old controversial treatises, and the works of Cats, the national poet of ancient Holland, hunting, and, among the pioneer settlers, war against the Kafirs, — these are the things which make up the life of the Boer. They are an honest, kindly, energetic, and prolific people. They form the majority in the western province of the Cape, in portions of the eastern province, in parts of Kaffraria and of Natal, and, lastly, they compose almost the entire population of the Orange Free State and of the Transvaal.

The English preponderate, according to localities, in the eastern province of the Cape, in Kaffraria, and Natal. They are more rapidly re-enforced by immigration than are the Boers, who have been left almost to themselves for more than a century. Holland sends few recruits to South Africa; an occasional Calvinist pastor, a few school-teachers and merchants, but almost no mechanics, numbers of paupers and waifs sent out at the expense of a committee in Holland, — these constitute the totality of immigrants from the mouths of the Rhine and the Meuse; but the slight skirmishes in which the Boers have defeated the English have revived in Holland the memory of the old relationship, and a wave of immigration will soon set toward southern Africa from the Low Countries and from Flanders.

The Hottentots, who once ruled here from the Cape to the tropic of Capricorn, call themselves Khoi-Khoi (men of men), Gui-Khoi (first men), and Ava-Khoi (red men). Notwithstanding the proud titles, which they adopted in their ignorance of the world, and which they still retain though they have had an opportunity to compare themselves both with the Kafirs and the Whites, there are few Negroes or Coppers so hideous as these Hottentots. The Khoi-Khoi of the European districts now speak nothing but Dutch; those who have not been subjugated by the Whites are taller, stronger, and less ugly than the others. Many of them have preserved their language, which is distinguished from all other tongues by its four clicks,¹ except from the Kafir, to which it has lent three of these extraordinary sounds, one of which imitates the popping of a champagne cork, another the cluck by which a driver urges on a horse; the other two can be compared with nothing, — they must be heard from the lips of a Hottentot.

The non-subjugated Hottentots, numbering about 25,000, roam over the arid western plain, on the south, and in greater numbers still, on the north of the Orange River, as far as the tropic of Capricorn and to the ocean; they live along ravines through which torrents sometimes roar, and where water can always be obtained by digging in the sand of the bed. They include the Koranas and the Griquas, who already speak Dutch as well as Hottentot; and the Namaquas, who are rapidly adopting the Dutch idiom. The independent Khoi-Khoi are more fond of "trekking" than the Boers themselves; they rove far and near, riding their oxen and accompanied by their gaunt dogs. Like all desert tribes, these savages possess very acute senses and wonderful powers of observation. As for the Bosjesmans, or Bushmen, the Hottentots call them *Saab*, or *Saan*. The Hottentots disown all kinship with them, but there is reason to believe that these puny, dwarfed myrmidons represent one of

¹ Mr. Edgar Barclay remarks the existence of clicks in the Kabyle tongue. See *Mountain Life in Algeria*, p. 10. — Ed.

the aboriginal elements of the Khoi-Khoi; in any case, the languages of the two peoples are closely related. The Bushmen are hunters; they pursue the wild beasts, bow in hand, with poisoned arrows.

The Bastards are a hybrid race, which originated in the early years of the colony, from Dutch fathers and Hottentot mothers; they speak and understand nothing but the Hollandish tongue.

The Kafirs are a very handsome copper-colored people, of remarkably symmetrical proportions, and ranking in stature next to the Patagonians, Polynesians, and West Africans. Nearly all the Kafir tribes live east of the Hottentots, on the slope of the Indian Ocean, in the favored country which derives from them its name of Kaffraria. They are split into small groups of warlike, semi-nomad herdsmen; they delight in slaughtering one another, tribe arrayed against tribe, clan against clan, chief against chief. They have all, likewise, — Fingos, Tambukies, Gcalekas, Gcosas,¹ Pondos, and Zulus, — confronted the English and the Boers in open battle; more than once they have come off conquerors, and they are ready to seize lance and shield again, or rather to take up their guns, for are they not now partially civilized? Thousands of them have been converted to the Anglican, Wesleyan, Methodist, or Reformed faith, and they enthusiastically chant hymns and psalms in Dutch, in English, and in their own sonorous tongue. But, whether Protestant or pagan, they are a warring race, one of those not easily effaced. They have proud, hot blood to shed before either Englishman or Boer robs them of the broad savannas where their fine herds of cattle pasture.

Cape Town, the capital of this country, is a city of 70,000 inhabitants, 18,000 of whom are Dutch, 9000 English, 20,000 to 27,000 Blacks, a few Malays, a few families from India, etc.

NATAL.

In Natal, as in Cape Colony, Whites, English, and Boers live by the side of Kafirs, but the copper-colored nation predominates very largely.

The surface of Natal rises from the ocean along the rugged slope of the Maluti Mountains, the summits of which form the western boundary of the country. The climate of the shore is moist and hot, but hardly has the murmur of the sea died on the ear when the traveller finds himself among temperate hills; a few hours later he is treading the grassy sod of the mountains, among groves, sandstone, and basaltic rocks, and sparkling waterfalls whose torrents bear lovely Kafir names. The higher he ascends, the cooler it grows, until at last the atmosphere becomes really cold.

In 1837 this favored region was entirely Kafir; it knew neither the Whites, nor their arts, their inventions, their eagerness to clear and plant the land, and subjugate or violate nature. They lived as their fathers before them had lived, often at war, proud of their chief when he was victorious, and fond of their oxen and their beautiful heifers. Then the Boers arrived, in heroic emigrations. In all, five thousand families fled thither from the old Cape Colony, to escape British restrictions. They left

¹ The *gc* in these two words represents a clucking sound which has no equivalent in any of the European languages.

behind them long trains of the dead, — women and children massacred by the Kafirs, men slaughtered in combat or treacherously drawn into some obscure ambushade, victims to the fatigue incident on crossing the mountains, and cattle killed by thirst, cold, and disease, or drowned in fording the torrents.

These emigrations resembled the ancient movements of the barbarian peoples. An entire nation, including the children and the aged, set out for the unknown, by unfamiliar paths; all their effects were loaded into heavy wagons, and armed men kept guard around the tents, the herds, and the families. These Boers, who knew so well their Old Testament history, may have looked upon themselves as a chosen



ZULU-KAFIRS.

people, traversing the wilderness, like Israel of old, from Egypt, their house of bondage, to the mountains of Canaan. Having conquered the Kafirs, after mighty struggles and terrible reverses, the Boers at last found themselves masters of the Canaan so long sought and so dearly acquired; they congratulated themselves on having quitted their arid country, with its steppe-like terraces, for a land of good grass, fresh savannas, forests, and torrents. — These torrents flow to the Tugela and to all those Kafir streams the names of which begin with *Um*, as, for example, the Umgeni (Entrance River), the Umkomazi (Slow River), the Umlazi (Milk River), the Umvoti (Fresh River), the Umzinkulu (Grand River), and the Umzivubu, to-day the Saint John's. At that time, these rivers, and many others, swarmed with crocodiles

and hippopotamuses; the lion and the leopard chased the graceful antelope, the huge giraffe, and every wild animal that lived on this prolific soil.

But before the Boers had rested from the fatigues of their march, Natal became a British colony, and the Dutch, recrossing the Malutis, founded the Orange Free State. From the Boer families that remained on the eastern slope of the mountains are descended the greater part of the 12,000 to 15,000 Netherlanders now inhabiting Natal by the side of an equal number of English, Scotch, Irish, Germans, Norwegians, and French from Bourbon and Mauritius. The whole population includes 35,000 to 40,000 Europeans and 460,000 Kafirs. The area of Natal is 18,725 square miles. The Coppers crowd the Whites here; and the pressure is continually increasing, owing to the influx from Zulu and kindred tribes. About 33,000 coolies from India are employed on the plantations.

The capital, Pietermaritzburg (pop. 16,000), is situated at an altitude of 2598 feet. The name is derived from that of the two chiefs who led the Boers across the Malutis to Natal, Pieter Retief and Maritz. The town lacks the life of Durban (Port Natal), a city of 23,000 souls, which serves as the port of the capital.

THE ORANGE FREE STATE.

In the early part of the present century, the broad steppe which has since become the Orange Free State (Oranje Frij Staat) was still an almost uninhabited region. It was burnt and arid in summer and autumn, but vegetation sprang up after the rains. Nomad tribes occasionally traversed it, but neither Hottentots, nor Bechuana's, nor Kafirs stopped here. A few Bastards, however, settled in this plateau before 1820, and "trekking" brought hither a few families of Boers. Later, the latter were re-enforced by nearly all the Afrikanders from whom the British in 1843 had taken Natal. In 1848 England annexed this young Republic, but it became independent in 1854, and for thirty years the free state has been continually strengthening by the arrival of Dutch from the old colony. This country, which unites the Cape to the Transvaal, is gradually becoming the centre of the race of the Boers; a nucleus is formed, which is already too hard to be broken. On plateaus, where the mornings are slightly cold in the season corresponding to our winter, the Boers of the Free State breathe a light, vivifying air; but the sun is too hot, and the fountains are often dry. The chief wealth of the country consists in its sheep.

Among the 208,000 inhabitants of the Free State, 78,000 are Whites, almost all Boers, and 130,000 Blacks or Cross-breeds, including Griquas, Basutos, Bechuana's, and other Bantus, notably the Barolongs. The latter, to the number of 6500, were until recently living peaceably as a state within the Free State, in a large district around their capital, Thaba-Nchu, or Black Mountain; their arrival in this territory, whither they were attracted by English missionaries, dates from about 1840; the Oranje Frij Staat has just annexed them, and their semi-autonomy is now only a memory.

As for the Nederduitsch people which predominates here, it is in no way unlike

the other Boers. The Hollanders of the Free State are very tall and stalwart; they are said to be infallible marksmen. Deeply religious by instinct or habit, and piously obeying their revered ministers, they open the day with a Christian hymn, and close it with verses from the family Bible. Their capital, 4750 feet above the oceans, is called Bloemfontein, or Fountain of Flowers.

THE SOUTH AFRICAN REPUBLIC.

The Transvaal. — In 1848 the English occupied the Free State, and it continued to be British territory until 1854. Twelve thousand Boers remained under the new rule; the others crossed the Vaal, or Yellow Garib, as they had previously crossed the Orange and the Malutis, and began in the north the settlement of the Transvaal Republic. The more prosperous the Transvaal became through the immigration of Boers from the Frij Staat, the Cape, and Natal, the more attractive were its healthful plateaus, its grazing-lands, and mines of every metal. In 1877 England took possession of the state, but she virtually renounced all claim to it by a treaty, recognizing the independence of the Transvaalers, and their right to call their country the South African Republic.

The 112,740 square miles of the Transvaal are spread out in plateaus between 2500 and 5000 feet high. In the south, the valleys and water-courses run toward the Vaal, the major affluent of the Orange; in the east, toward the Indian Ocean, and in the north, toward the Limpopo, a stream having a catchment basin of 216,000 square miles. The banks along the lower course of the Limpopo are wholly tropical, abounding in lions, hippopotamuses, crocodiles, monkeys, elephants, and giraffes; it descends by a long curve to the Kafir coast.

The climate is very healthful in the uplands, but it becomes less so as one nears the Indian Ocean. In the Lydenburg district the atmosphere of the plains is already hot, humid, and heavy. In the vicinity of Wakkerstrom, a village situated at an altitude of 6000 feet, snow falls in winter. The Transvaal possesses all the climates, from that of Spain to that of the tropics, and all kinds of vegetation, from the fir to the palm-tree; coffee, sugar-cane, pineapples, and oranges find their place here, as well as corn, barley, and oats; but cattle-raising will always constitute the chief source of revenue of these Boers, together with gold-mining and diamond-digging.

The Transvaal probably contains 100,000 to 105,000 Boers, and 8000 to 15,000 English and other Europeans, — in all, about 120,000 Whites, against 560,000 Blacks; most of the latter are Kafirs and Bechuanas. Since their small victories over the British, the Dutch of the South African Republic have full faith in their future, those of the Orange Free State feel that their government is more secure, and those of the Cape have roused from their stupor. These last were apparently resigned to being absorbed by the English, whose tongue supplants one language, or, at least, one dialect, every year; but the roar of the firing on the Majuba¹ hill taught them once more

¹ A hill where the Transvaal Boers defeated the English.

that they were Netherlanders. From the southern point of Africa to the Limpopo breathes one united family, young and ambitious, and, like its famous Cape, the tempest-tossed people has become the people of "good hope."

The largest villages, for they can hardly be called burghs, are Pretoria and Potchef-



CAVE ONCE OCCUPIED BY CANNIBAL KAFIRS.

strom. Pretoria is thus named from Andries Pretorius, one of the national heroes during the tragical migrations of the Boers, and Potchefstrom¹ combines portions of the names of three popular leaders, Potgieter, Scherf, and Streckenstroom.¹

Stella. — Goshen. — The Zulu Republic. — The Transvaal had been greatly aug-

¹ For Potscherfstrom.



ANGLO-DUTCH TRAVELLING EQUIPAGE, AFRICA.

mented recently on the west and south-east; it had founded three republics, two of which, Stella and Goshen, are situated on the west, and occupied by Boer adventurers,¹ condottieri who sold their services to Bechuana chiefs during one of those civil wars in which the Bantus delight.

Stella lies north of Griqualand and the Orange Free State, along the Hart, a right affluent of the Vaal. The Hart of the Boers — the Dry Hart of the English — is a nearly waterless river-bed, one of those which in Algeria are called *wady seco*. The area of Stella is about 5000 square miles; the population comprises 3000 Whites, nearly all Netherlanders, and 17,500 Batlapis, a Bechuana tribe. Its capital is a village named Vrijburg.

Goshen, north of Stella, embraces about 4000 square miles, in the basin of the Molopo, a long *wady seco*, running across deserts toward the Orange River, but very rarely reaching it; 2000 Whites, a few Boers, and a few English dwell here, among 15,000 Barolong Bechuanas. The country is arid and barren, but is nevertheless better watered than Stella.

England has occupied the two republics, and brought the Bechuana territory under her protection. But though the Nederduitsch are no longer in peaceful possession of the country forming the natural route from the Cape to the Zambeze and interior Africa, Stella and Goshen, peopled with Dutch, and continually re-enforced by vigorous families from the entire African Netherlands, are nevertheless augmenting the patrimony and the power of the Boer nation.

The Zulu Republic, founded (like the two others) by the intervention of the Boers between Zulu chiefs as warlike as ever the Bechuanas could have been, covers 440 square miles, in a region as favored as Goshen and Stella are sterile. The country lies in the vicinity of the Indian Ocean, where it is swept by sea-breezes, in the zone of rains; it has forests, grazing-lands, torrents, and rippling brooks. It is inhabited by 2500 Boers and 40,000 to 50,000 Zulu-Kafirs. The fate of this offspring of the Transvaal is not yet settled.² The capital has adopted the name of Vrijheid, or Liberty.

THE AUSTRAL DESERT.

The Kalahari Desert. — Lake N'gami. — North-west of the Transvaal, toward the interior of the continent, we encounter the vast Kalahari Desert, before reaching Lake N'gami, the shallow waters of which cover, on the average, 300 square miles; in excessively wet seasons, the lake has a circuit of 90 to 95 miles; it shrinks remarkably in very dry seasons, and may even disappear. It receives the waters from an extensive basin, traversed by long rivers, notably the Cubango and the Cuilo, which have their sources on the same plateau with the Zambeze, the Coanza, and the Cunene; but

¹ Aided by a certain number of English adventurers.

² Although the Zulu Republic as at first constituted (August, 1884) embraced a large section of the Zulu territory, the Boers succeeded in obtaining additional grants which extended their domain to Santa Lucia Bay. This brought them into conflict with the English. In October, 1886, a treaty was concluded between delegates of the Zulu Republic and the authorities of Natal, whereby the Boers surrendered their claims to the coast region, and the Zulu Republic (1880 sq. m.) was confined to the western part of independent Zululand. But in 1887 the Republic signed a treaty of union with the Transvaal. — Ed.

while the Zambeze becomes a mighty stream, and the Coanza a mediocre river, the Cubango, Cuilo, and several others dwindle away in a dry zone, where the humidity seems to be decreasing every year; the Kalahari Desert partially absorbs these currents; all those which descend from the arid *massif* over which the Damaras roam are lost in this Sahara.

The surplus waters of Lake N'gami are discharged by the river Zuga. An extraordinary rainfall may perhaps carry this stream as far as the Zambeze; but the waters rarely fill their channel, — they evaporate, or filter into the ground, and terminate in a saline basin, or a *zutpan*, as the Boers say. The *zutpans*, these thirsty trenches, and the N'gami, constitute the deplorable remnant of a very large lake, an inland sea, which the austral sun has nearly effaced. The area of the South African basins having no outlets is estimated at 496,000 square miles, 303,000 of which belong to the Zuga net-work.

THE ZAMBEZE AND THE EASTERN COAST.

Delagoa Bay. — Sofala. — Monomotapa. — From Port Natal to the equator, and from the equator to the historic limits of Abyssinia (12th parallel N.), a hot and oftentimes unhealthful country skirts the Indian Ocean. It is known under various names, but the entire tract is called the Eastern Coast. Northward, beyond Port Natal, we encounter first the kraals, the grazing-lands, and the forests belonging to the Zulus, extraordinarily warlike Kafirs, who suddenly became famous (in 1879). The country is well watered and beautiful. Before reaching the Inhampura, as the lower Limpopo is called, under the 26th parallel of south latitude, we enter Delagoa Bay, which belongs to Portugal. Lorenzo Marquez, a young town on its shores, is the natural port for the Boers of the Transvaal; it is the place from which they will, in the future, carry on their intercourse with the exterior world.

From this bay, in a north-easterly direction, the Portuguese rule, at least nominally, over about 400,000 square miles and 950,000 men (the latter number is purely hypothetical). The suzerainty of the Portuguese here dates from the days of their greatness, when they reigned over all the African shores from Santa Cruz to the Red Sea, when they built forts on the Abyssinian plateau, and when they explored the interior in search of the fabulous kingdom of Prester John, when Albuquerque was making conquests in India, and when Brazil was rising into power, greater and more marvellous than India itself. Portugal thought herself too rich, and scorned Africa; at the very most, she made two attempts to reach the mines of Maniça and Chicova. To-day, the colony, which might have extended indefinitely over the interior districts, is composed of a few trading-posts, which are occupied by a few ease-loving Whites.

The southern part of the Portuguese littoral is called Sofala, from a feverish town on the coast, which is supposed by some to be the Ophir with which King Solomon traded. Farther north, the coast is called Monomotapa; it is here that the Zambeze terminates, a stream which waters countries having a great future before them, — except, perhaps, the districts infested by the tsetse; man can defy the poison of this insect, but it is fatal to cattle, horses, and dogs. These animals languish, grow thin,

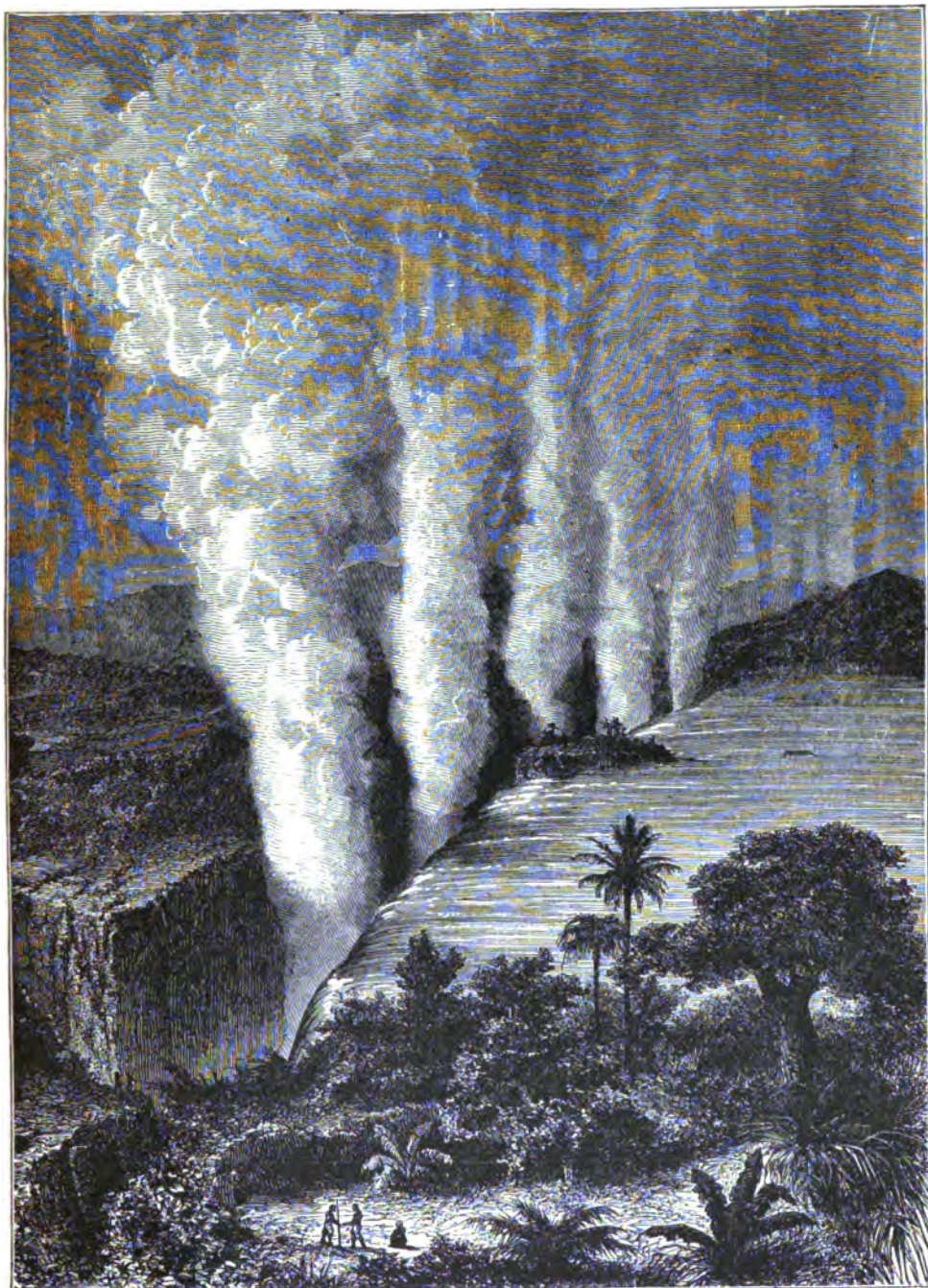
and die within a few days after being bitten by it; it is in the reed jungles around the swamps of the middle Zambeze that the tsetse is found in the greatest multitudes.

The Zambeze. — Lake Nyassa. — Luambedji, Luambezi, Ambezi, and Odjimbezi, are all different forms of one name, signifying stream, or river.

The Zambeze drains a basin the area of which is estimated at 552,000 square miles, or eight and a half times the size of New England; by far the greater part of this basin seems to be excellent land. In volume, the Zambeze ranks third in Africa, after the Congo and the Niger. It rises in small lakes on a swampy plateau, 3986 feet above sea-level. It is called at first the Leeba. Already 2000 to 3000 feet broad, oftentimes 5000 after it has received the Leeambye, it leaps and foams through gorges in the basaltic, brown trap, and sandstone rocks: the Gonye Fall (43 feet) is followed by two cataracts having together an altitude of 174 feet, then by the great Kale Fall, then the Bombwe, only six or seven feet high, then the three Mambwe cataracts, — all three very low, — and, lastly, the mighty cataract of Katima Moriro.

Below the Chobe, or Cuando, a powerful tributary, the banks of which are devastated by the tsetse, rapids announce the approach to the Smoke-Sounding Falls (Mosi-oa-Tunia), which the English have christened Victoria. On reaching the brink of this abyss, the Zambeze is still 2608 feet above the oceans. With a leap of 390 feet, the Smoke-Sounding Falls can scorn Niagara, which has an altitude of only 150 to 160 feet. The African river does not, like the American stream, precipitate itself into an ample basin by a broad, horseshoe-shaped sheet; it drops into the fissure of a basaltic rock, a gorge 5300 feet long, 426 deep, with a width at the top of 330 feet and at the bottom of only 144. This chasm engulfs the entire mass of the Zambeze at once, in front of an island where the cocoanut-trees remind us that the tropical sun shines on this wonder of nature, as the northern sky, pregnant with snow-storms, hangs gloomily over the cataracts of Scandinavia and Canada. Over the floods strangled and brayed at the bottom of the abyss, columns of vapor rise 650 feet, much above the walls of the fissure; they herald for a long distance the presence of the miracle of waters. From this point to the confluence of the Kafue, the stream is broken four times more — in the rapids of Kansaro and of Nakabele, the Falls of Kariwa, and the eddies of Kokolole, — after which, quitting the basaltic rock, it flows through granite and syenite; at the cataract of Morumbawa, 30 feet high, it contracts to 151 feet; then follow, 20 miles above the Portuguese trading-post of Tete, the cataracts of Kebrabasa, in a channel where the stream rises 79 feet in the great freshets; these rapids prevent navigation during the dry season, but during the floods they do not cause even a ripple on the surface of the Zambeze. At Tete, the stream is about a mile and a half in width, but it soon narrows again in the Lupata Mountains, where it is not more than 650 to 1000 feet broad. Below Sena, the Zambeze absorbs the Shira, a river 260 miles long, issuing from Lake Nyassa.

Lake Nyassa resembles Tanganyika very closely; the southern point of the latter is scarcely 200 miles from the northern point of Nyassa. Both lakes have nearly the same length and width, almost the same area, the same direction, and both are framed in by lofty mountains; but Lake Nyassa is only 1591 feet above sea-level, while Tanganyika lies at an altitude of 2690. Even during the very few years that observations have been taken at Nyassa, it has seemed to be on the road to desiccation; the mountains which encircle it no longer descend vertically into the waves, but are separated from them by an alluvial plain, which the massika converts into a marsh where elephants roam in great numbers. Such as it is, the lake, with a breadth of 15 to 56



THE SMOKE-SOUNDING FALLS.

miles, stretches along 340 miles, from the northern extremity, dominated by the Livingstone chain (loftier than the Pyrenees), to the southern, where the surplus waters are discharged.

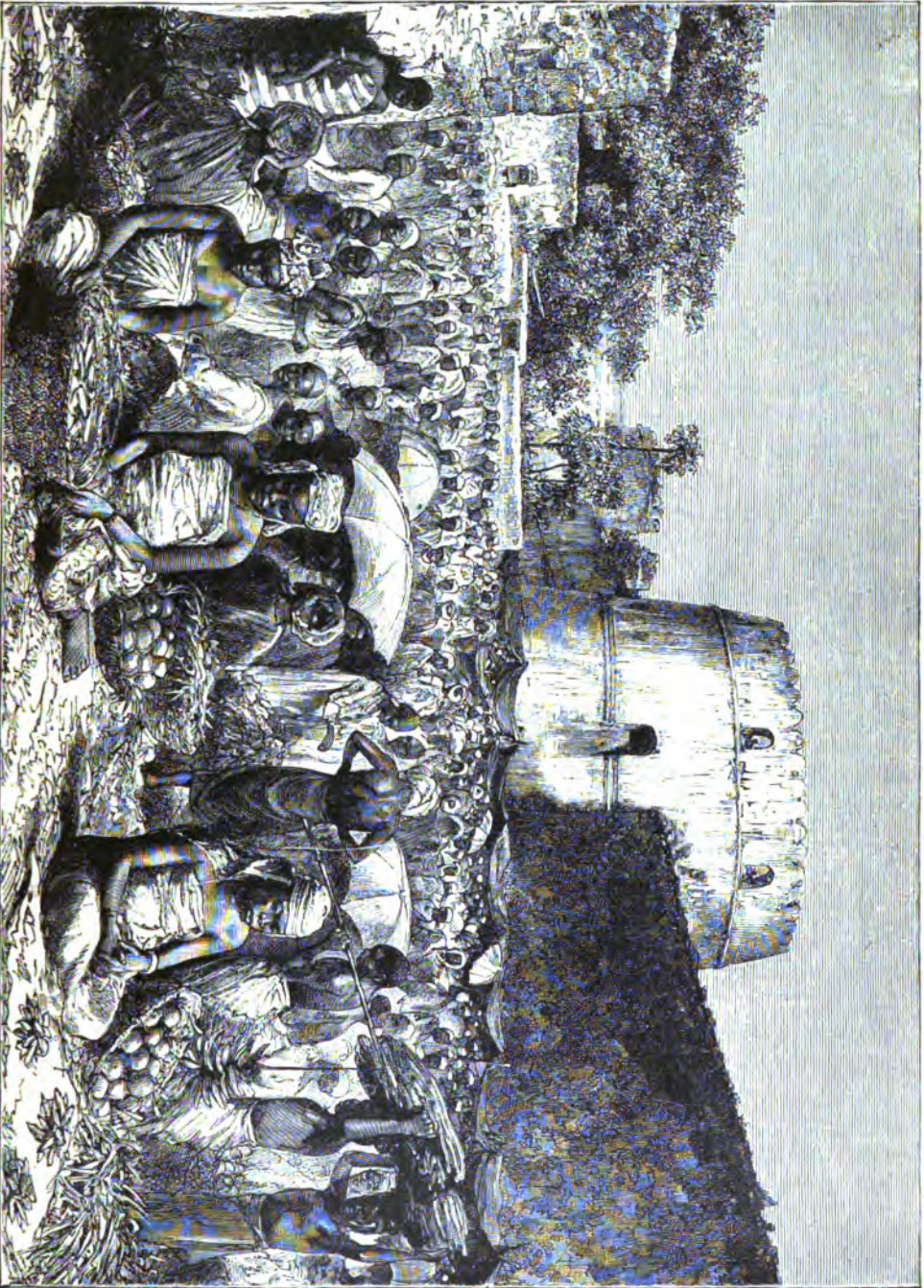
Below the Shira, the Zambeze enters its delta of 3000 square miles. The largest of its branches, the Kuama or Luabo — navigable at all seasons — terminates by a bar; the Kuakua, or the arm of Quilimane, becomes a marsh during the dry season. The arms, false arms, swamps, side-channels, and the stream itself, swarm with crocodiles. The length of the Zambeze is estimated at 1652 miles, in a distance of 1100, measured in a direct line from the source to the mouths, which face the distant coast of Madagascar.

Mozambique, Zanzibar. — The Vuasawahilis. — North of the Zambeze, the shore faces Madagascar; it remains Portuguese as far as Cape Delgado, which marks the delta of the Rovuma, a large stream, having Lake Shirwa (1457 feet above sea-level) in its basin. This Lusitanian coast is called Mozambique, from a town of 7000 inhabitants, built on a volcanic reef close to the Mozambique coast; for centuries, multitudes of slaves were embarked from this port for the plantations of America. Nearly all the seaboard is unhealthy; Portugal transports thither many of its criminals. The two or three thousand so-called Whites of the colony are chiefly Arabs, or Hindus from Goa, Diu, and Damao.

Beyond the Rovuma, the long Zanzibar coast begins; it embraces the towns of Quiloa (pop. 15,000), Mombas (pop. 15,000), and Malindi, formerly slave-trading ports. It extends as far as the equator, terminating at the river Juba, which rises in mountains inhabited by the savage Galla. The city of Zanzibar (pop. 100,000), the residence of the recent ruler of this coast, is situated on an island of the same name, 19 miles from the mainland; it is from this island of 625 square miles that the Zanzibar coast derives its name. A heavy climate, with a mean of 80.6° F., and a yearly rainfall of 61 inches, hangs over the city and island. The Sultan of Zanzibar was, until the year 1861, subject to the Iman of Muscat. Though now ruler of the islands, he is in fact obedient to a European power. Not long since it was the friend and semi-vassal of Great Britain, who from Zanzibar alone aimed at the Great Lakes, the Congo, and all central Africa. At that time, "From the Cape to Alexandria" seemed to have been adopted as the motto of all the British colonies of the southern Triangle. But the wheel has turned. Germany, anticipating England, has well established herself on the route to the lakes, on the west of and in proximity to Zanzibar.¹ It is the German government which is now moving on central Africa most openly, having begun to invest it on three sides — in Cameroons, in Luderitzland, and in Zanzibar. The countries which it has brought under its protectorate, back of the Zanzibar littoral, namely, Usaguha, Ukami, Usagara, and Nguru, lead equally to Tanganyika and Nyassa; together, they embrace many thousand square miles, with high plateaus, lofty mountains, beautiful valleys, and strong rivers, where the rainy season unchains immense torrents. It is, in fact, a superb region, but it is infected by deadly fevers, and acclimatization will be extremely difficult.

The peoples along the coast between Cape Delgado and the river Juba speak languages having some ties of relationship with the great Bantu idiom. They have been mixed from early times with Arabs, and they seem to be equally allied with the Kafirs, the Bechuanas, and other Negroids or Coppers, of southern and central Africa. They are usually classed under the name of Vuasawahilis or Sawahilis, a

¹ The Zanzibar coast is now administered by British and Germans; the islands are under British protection.



A FRUIT MARKET IN ZANZIBAR.

term derived from the Arabic word *sahel*, signifying coast. Besides their various dialects, many of this hybrid race speak the tongue of the Koran; the Arabs have always been very influential among these "coastmen," as warriors, potentates, slave-hunters, merchants, and proselyters. There are many of the East Indian traders, known as Banyans, in the commercial towns on the shore and in the neighboring coral-islands.

The Somali.— Beyond the equator, nature loses its opulence, and the littoral soon exhibits all the aridity of the desert. It stretches away, in a north-easterly direction, burnt and desolate, to Cape Guardafui, a promontory separating the Gulf of Aden from the Indian Ocean; here it turns in a westerly direction. These two coast-lines enclose the peninsula of the Somali, the only marked projection of the African continent. The excessively scant torrents of this peninsula form no stream which reaches the sea; it requires a mighty storm, overspreading the entire heavens, to trace veritable river-courses at the foot of its extinct or slumbering volcanoes. Such deluges are rare, however, on the burning mountains, which are here limestone, there volcanic, but almost everywhere naked and bare. The land of the Somali is essentially the country of perfumes, essences, and odoriferous gums.

The Somali are said to be crafty, vindictive, and ferocious; they are fond of war. They are beginning to use fire-arms, but formerly their weapons were the bow and arrow, the sling, the club, the lance and shield. They delight in pillage, but, with the exception of a few paltry raids from tribe to tribe, or from one thatched or skin village to another, they have no chance to gratify their plundering propensities, except such as is offered by the shipwrecks on their rugged coast.

They show in their features, and in the different hues of complexion, two origins: the Arab race has been mixed here with the Negroids and Negroes of the elevated regions on the west, beyond their own mediocre mountains and net-work of ravines: they speak of themselves indifferently as descendants of the Galla or of the Arabs; from the latter they have received the doctrines of Islam and the language of "the book,"— but neither religion nor language has totally conquered this nation, which rebels against all forms of bondage.

AFRICAN ISLANDS.

The Azores and Azorians.— **The Sargasso Sea.**— Geographers attach the Lusitanianizing Azores to the dark continent, although they are situated as near to Europe as to Africa, and although they are in European latitudes. This is due, perhaps, to the fact that Madeira and the Cape Verde Islands, which are likewise Portuguese, rise out of a genuinely African sea. The Azores, lofty and scarped, lift their heads opposite Estremadura, Alemtejo, and Algarves, 600 miles or more from the motherland, on the route between Lisbon and New York. They are nine in number, besides a few islets. The total area is 922 square miles.

The smallest, and, at the same time, the most northerly, is Corvo; it contains only 880 inhabitants, who are grouped around a peak 2549 feet in altitude. Flores is Corvo's nearest neighbor, the two islands being only eleven miles apart; Flores has

about 10,000 inhabitants, who dwell along the shore and in valleys descending from Morro Grande (3090 feet). More than 125 miles separate Corvo and Flores from the principal nucleus of the Azores, in which are comprised the islands of Graciosa, Terceira, São Jorge, Fayal, and Pico.

Graciosa is indeed a charming island, although it is destitute of forests. It is next to the smallest of the Azores, and its loftiest elevation is only 1299 feet. It contains 13,500 inhabitants.

Terceira, the second largest island, is beautiful and fruitful; it possesses the capital of the group, called Angra; its Caldron of Santa Barbara (3501 feet) proclaims by its very name that the 45,000 inhabitants dwell on a volcanic soil.

São Jorge (Saint George), ten times longer (34 miles) than broad, supports a volcano of about 3000 feet, bearing the strange name of Mount Hope; this volcano ravaged the island in 1808. The population is 16,500.

Fayal is well wooded, but has no streams; the 25,000 islanders are dependent for water upon wells. The chief town is Horta.

Pico emerges three or four miles from Fayal. It is visible to a greater distance than any of the other islands, for its peak, still an active volcano, reaches an elevation of 7290 feet, and glistens with snow during 4 months of the year. The population is 29,000. The soil is poor, but it produces a famous wine.

São Miguel, or Saint Michael's, the largest and most populous of the islands, supports more than 126,000 inhabitants, or nearly a half of all the Azorians. It is situated far to the south-east of the central group, forming a little world by itself; its Pico da Varra has an altitude of 3573 feet; the chief town is Ponta Delgada.

The most southern of the Azores, Santa Maria, attains an elevation of 1870 feet in Pico Alto. It has a population of 6600.

The entire group is of volcanic formation, and the islands are almost uniformly fertile; the climate is delightful; its mean of 62° to 64° is about that of southern Portugal, though the temperature is less fluctuating here, and the rainfall is more copious. Few of the valleys are shut off from the life-giving sea-breezes. Orange-trees are sometimes to be seen bearing 25,000 oranges.

When the Portuguese landed on these rugged coasts, in 1482, they found neither men nor the larger animals; they imported animals from Europe, but the archipelago paid for this increase of life by the ruin of its forest, little of which now remains except a few clusters of cedars, pines, and firs, and, here and there, the shrubs of the southern thicket. The islanders, who are very largely of Portuguese stock, with Flemish mixtures, form a most prolific nation. They have emigrated in large numbers to America, and it is possible that there are a great many more Azorians outside of the Azores than on the islands themselves. On account of these emigrations, the population increases but slowly; at certain epochs it has even decreased. The Azorians were the first colonizers on Brazilian soil, and for centuries they have emigrated to Brazil, the Antilles, British Guiana, the Sandwich Islands, the United States, and, to some extent, to the Portuguese province of Algarves.

The capital, Angra, on the island of Terceira, has scarcely 12,000 inhabitants, or 6000 less than Ponta Delgada, in São Miguel.

South-west of this archipelago, in the direction of the Antilles, is a large area of comparatively still water, lying in the interior of the North Atlantic circulation, and covered with masses of floating sea-weed. This is called the Sargasso Sea. There are other fields of equal extent in the Atlantic and Pacific.

Madeira and its Inhabitants. — Madeira, embracing, with its dependencies, an area of 315 square miles, rises off the coast of Africa, on the route between the Azores and the southern coast of Morocco, nearly midway between the Azores and the mainland, and almost equidistant from the 30th and 35th parallels of latitude. It has three dependencies: Porto Santo, surrounding a volcanic mountain, and supporting about 1750 Portuguese inhabitants, on 20 square miles; the Dos Santos; and three reefs forming the Desertas. Madeira is 34 miles long, and is entirely of volcanic formation. Pico Ruivo, or Red Peak, the highest summit, has an altitude of 6060 feet. When the Portuguese arrived here, mighty forests shaded all the mountains, and it was from this wooded covering that the island derived its name. In the Lusitanian language, *Madeira* (*materia*) signifies wood, — it is the same word with our term *madrier*. Madeira does not possess the orange groves of the Azores, and the oidium and phylloxera have, at different periods, made terrible havoc in its famous vineyards; but these have been replanted, and the lava is so fruitful here that it may restore all that has been destroyed. Madeira has long been a resort for invalids suffering with lung-diseases.

The 134,000 inhabitants are Lusitanians, mixed to a certain degree with Blacks; they are good Roman Catholics, loyal and peaceable. They speak the language of Portugal, with a soft accent. They emigrate in as great numbers as do their brothers, the Azorians, — to Brazil, British Guiana, the Antilles, the Sandwich Islands, and the Cape of Good Hope. The seat of the government, Funchal ("fennel-place"), is a city of 21,000 souls.

The Canary Islands. — The Peak of Teyde. — The Canaries face the south-western coast of Morocco, opposite the regions bordering on the Great Desert. These are the Fortunate Islands of the ancients, which were lost sight of during the gloom of the Middle Ages, but rediscovered, it is claimed, by the Genoese, in 1295, and colonized by Spain after 1478. Before they fell into the hands of the Spaniards, the Canaries were partially conquered by a Norman Frenchman, Jean de Béthencourt, in 1402. The archipelago embraces 2808 square miles, and is composed of seven large islands and five uninhabited islets; the total population is 288,000.

Fuerteventura, four times longer (60 miles) than broad, attains an elevation of 2805 feet in the Orejas del Asno. None of the other Canaries is as near to the coast as this volcanic, rainless island, where scarcely 10,000 persons inhabit 664 square miles.

Lanzarote lies six or seven miles north-east of Fuerteventura. It supports a mountain of 2244 feet, and vast lava-masses, which bear witness of recent eruptions. Including islets, it embraces 286 square miles.

Grand Canary rises about 50 miles west of Fuerteventura; it comprises 531 square miles, and contains a peak of 6401 feet, the Pico de los Pechos, dominating a central group, from which descend, it is said, 103 *barrancos*, or ravines, in a fan-shaped group; the principal city, Las Palmas, the most populous of the archipelago, lies on the best harbor of the Canaries. It contains 18,000 inhabitants.

Teneriffe is about 37 miles north-west of Grand Canary. Its 750 square miles form the pedestal of one of the most celebrated mountains of the globe, the Pico de Teyde; this volcano is inactive, emitting nothing but smoke, but the inhabitants of the island have good reason to fear its eruptions. The Peak of Teyde rises in the form of a pyramid to a height of 12,189 feet; it is covered with grayish broom. Teneriffe is a beautiful island, and the Canaries, as a whole, would merit their ancient

name of Fortunate Islands were it not for the extreme heat of the sun and the scarcity of rain, and but for the locusts, which reach the archipelago in clouds from the Sahara.

Only 17 miles separate Teneriffe from Gomera. This latter island covers 146 square miles; its culminating point is the Cumbre Garojona (4396 feet).

The north-westernmost island of the group, Palma, embraces 280 square miles; it supports a mountain 7730 feet high, called the Pico de la Cruz. It contains a crater



TENERIFFE.

9 miles in diameter, known as the Caldera (*i. e.*, caldron), from which, on its south-west side, a ravine runs down to the sea. There has been no eruption of any volcano on the island of Palma since 1677.

Hierro, or *Ferro*, forming the south-west angle of the Canaries, is about 40 miles from Gomera. It rears a mountain 4987 feet in altitude. This island is famous as the spot from which geographers were formerly in the habit of measuring all longitudes; it was the most westerly land known to them. Its area of 107 square miles ranks it last among the major islands of the group; the minor islands are Lobos, Graciosa, Alegranza, Montaña Clara, and the two Roquetes.

The present inhabitants of the Canaries are of Spanish (especially Andalusian), Flemish, Norman, and Irish descent; in certain districts there is some little black

blood; as for the derivation of the original inhabitants, the Guanches, nothing certain is known. They probably belonged to the Moroccan Berber trunk; when the Europeans landed in the archipelago, the Guanches formed a small agricultural people, and along with them dwelt a few families of Arabs. Many of the Guanches fell in opposing the Spanish invasion, many were sold by their vanquishers as slaves, and many adopted the Roman Catholic faith and intermarried with the Spaniards. Nothing now remains of them but the slight traces of their blood left in the Spanish Canarians, certain barbaric monuments, and the mummies to be found in the caves of the island; like the ancient Egyptians, the Guanches embalmed the bodies of their dead. A few Negroes of the Canaries are the descendants of Blacks imported into the archipelago at a time when sugar-cane was cultivated there. The population augments but slowly, on account of the emigration to different Spanish-speaking lands.—Santa Cruz de Santiago, on the island of Tenerife, is the capital. It has 17,000 inhabitants.

The Cape Verde Islands.—The name of this archipelago is derived from Cape Verde, the westernmost point of Africa. The nearest island is, however, 375 miles away from the mainland. About 111,000 inhabitants occupy the 1500 square miles of this little Lusitanian world. The islands, twelve in number, all possess a fruitful soil, but they are exposed to seasons of terrible drought. The climate is unhealthful, and earthquake shocks are frequent. In rainy years the country is a paradise of green, except on the bald mountains; in dry years, such as 1773, 1831, 1832, 1833, 1846, 1864, and 1865, the inhabitants have to choose between flight and death. The famine of 1831–33 destroyed or drove from the country 30,000 persons. The islanders emigrate in large numbers to Brazil; they are composed mostly of Negroes, or Mulattoes, with a few thousand of more or less pure Whites, and scattered descendants of Canarian Spaniards. All profess Roman Catholicism, and all speak a jargon corrupted from the Portuguese, and called *lingua creoula*.—Porto Praya, the capital, has a mean annual temperature of 76° F. It is situated on the unhealthful island of San Thiago.

San Thiago, the largest island of the group, bears a peak of nearly 5000 feet. The 45,000 inhabitants are of every hue of complexion from light olive to shiny black. The agricultural products, some of which are exported to the other islands, consist of sugar-cane, maize, kidney-beans, rice, and manioc. At the right of San Thiago lies Maio; on its left is Fogo, which is followed by Brava.

Maio hardly recalls the beautiful month of the year whose name it has received. It is a barren, treeless waste, surrounded by dangerous rocks. The inhabitants, who number less than 2000, are supported mainly from their cattle and from the exportation of salt.

Fogo rears near its centre a lofty and dangerous volcano (8858 feet). The island is healthful, but almost no rain falls. The great famine of 1831–33 diminished the population from 17,000 to 5615.

The charming, healthful island of Brava is the "Paradise" of the archipelago, but it is destitute of forests, and almost of trees. The inhabitants, who are for the most part Whites, are descended from Madeiran emigrants and from families driven from Fogo by the volcanic eruption of 1680.

Sant' Antao ranks next to San Thiago in size and population. It contains a peak, the Sugar Loaf, which is thought to reach the altitude of 8000 feet; this mountain is visible for 50 miles out to sea.

São Vicente, which lies near Sant' Antao on the east, possesses the best harbor of

the archipelago; it was uninhabited until toward the end of the last century, when 20 families from Fogo settled on it.

São Nicolao is mountainous in the interior. Toward the western end rises an extinct volcano, called Monte Gordo (4429 feet).

Sal, as its name indicates, produces salt. It contains a population of about 950 persons, a third of whom are employed in the salt manufactories.

Bõa Vista is said to be as healthful as Brava itself; notwithstanding its attractive



FERNANDO PO.

name, the island is unsightly, its surface consisting solely of white sand, glittering salt, and desolate, burnt hills.

The Islands of the Gulf of Guinea. — Fernando Po, Ilha do Principe, São Thome, and Annabona follow one another from north-east to south-west, not far from the equator.

Fernando Po (800 sq. m.) is thus called in the language of its rulers, the Spaniards, but its true name is that of the Portuguese discoverer, Fernão do Pô. It is of volcanic formation. It has fine bays and gulfs; rivers are abundant, and the soil is

fruitful, but the climate is dangerous. The Portuguese established no permanent colony on the island, and it is only recently that Spain formed a settlement there by transporting thither some hundreds of Cuban insurgents. England has long desired the possession of this island, because it commands most admirably the Gulf of Guinea, the mouths of the Niger, and the Cameroons coast. Clarence Town, a small Negro settlement, was originally English; it was established in 1827 by British merchants who carried on commerce along the lower course of the great Soudanese stream. It is dominated by a magnificent cone, black with forests, called Clarence Peak (10,030 feet). The natives, called Bobies, are a peculiar race, differing in physical characteristics and in language from their neighbors of the continent; they are of small stature, and copper-colored rather than black. They are supposed to number 25,000. The rest of the islanders consist of Negroes imported by the English, a very few Europeans, Cubans, and half-castes.

Ilha do Principe, or Prince's Island, belongs to Portugal. It lies in the Bight of Biafra, 140 miles south-south-west of Fernando Po. It comprises less than 60 square miles, with about 3000 inhabitants, composed of Negroes, Mulattoes, and a few Whites. These speak a very corrupt form of Portuguese.

São Thome, or Saint Thomas, very nearly touches the equator, 90 miles from Ilha do Principe, and about 170 from the mouth of the Gaboon River. It is of volcanic formation, and its culminating point is 6500 feet above sea-level; the mountains are thickly wooded, and the rains are copious. The torrents and little rios which descend to the Atlantic are very charming. The area of the island is 355 to 360 square miles. The inhabitants embrace about 1200 Whites and nearly 17,000 Negroes and Mulattoes; the latter make use of an exceedingly corrupt Portuguese jargon. Saint Thomas was formerly a much more thriving island. In the sixteenth century it was occupied by numerous Portuguese planters, who possessed large sugar-cane plantations; but the fame of Brazil attracted most of these, with their slaves, across the sea. The population of Prince's Island was decimated in the same way. Saint Thomas and Ilha do Principe are governed from one capital, Santa Anna de Chaves, called also São Thome.

Annabona, or Anno Bom, is a Spanish island, situated about 120 miles from Saint Thomas. It was discovered by the Portuguese on the first of January, 1473, from which circumstance it received its name, "Dia de Anno Bom," being the Portuguese term for New Year's day. It embraces about 7 square miles, and contains a basaltic cone 2360 feet in elevation. When the Portuguese arrived here, the island was uninhabited. Between 1550 and 1600 a few slaves were imported, and a mixed race sprang up, which to-day numbers about 3000. These inhabitants are nearly black and almost savage. They profess the Roman Catholic religion, and speak a Portuguese *patois*.

Ascension is a solitary island, belonging to the English, situated about 970 miles from Cape Palmas on the African coast, and 1450 from the Brazilian Cape Saint Roque, in latitude 7° 56' S. The peaks, cones, and extinct volcanoes are dominated by the Green Mountain, which reaches an altitude of 2838 feet. Notwithstanding the name that has been bestowed upon this mountain, Ascension lacks verdure. The reddish or blackish rocks are barren and desolate. It embraces 3½ square miles, which are occupied by about 150 inhabitants.

Saint Helena contains 5000 inhabitants, a half of whom are Negroes; the island is a mass of bald basalt, dominated by Diana's Peak (2870). This summit looks down

upon the vale of Longwood, where Napoleon had his residence, and where he died. These islanders dwelling 1200 miles out from the mainland, are prisoners of the ocean.



A NATIVE DWELLING ON FERNANDO PO.

Nothing varies the monotony of their existence except the arrival of ships which bring them news of the great world; but fewer and fewer vessels put in here since the piercing of the Isthmus of Suez. Saint Helena was discovered by the Portu-

guese, but was afterward taken by the English, who have converted its 47 square miles into a Gibraltar bristling with batteries. The chief town and seat of government is Jamestown (pop. 2500).

Tristan d'Acunha is another English island which was discovered by the Portuguese. It rises out of very deep water not far from the 40th parallel of south latitude. It is far out to sea, but nearer to the Cape of Good Hope than to any other shore. The surface is mountainous, and one extinct volcano reaches an altitude of 8200 feet. The climate is mild and moist, but wondrously healthful. The area embraces about 45 square miles, and the inhabitants, who are of mixed origin but of English speech, number less than 100.

Madagascar; its Physical Characteristics and Inhabitants.—There are only two islands on the globe which surpass Madagascar in extent, namely, New Guinea and Borneo. It is separated from Africa by the Mozambique Channel (210 to 220 miles broad), and adds to the area of the African continent fully 228,000 square miles. It has a length of 1010 miles, with a breadth varying from 200 to 300, and, with the exception of the extreme southern point, it lies wholly within the tropics. Viewed from above, Madagascar is seen to possess two physical regions: in the west and south of the 23rd parallel, are moory plains below 500 feet in elevation; in the east, north, and centre, mountains and plateaus from 3000 to 5000 feet high. The uplands occupy nearly three-fifths of the country. The western part of the island, which is rarely visited by moist winds, is drier, less thickly wooded, and consequently less fruitful, than the abundantly watered eastern slopes. Among the domes and cones few surpass 6500 feet. The culminating point is near Antananarivo, the capital. It is called in the sonorous Malagasy tongue, *Tsi-afa-javona*, i. e., "that which the mists cannot climb." It has an elevation of 8950 feet, and rises from 3900 to 4700 feet above the general level of the surrounding country. The *Tsi-afa-javona* is less majestic than the isolated peak of Amber (5900 feet) near the northern point of the island. Perennial snows are impossible in these latitudes at such altitudes, but the country is well watered, as the abundant rainfall furnishes an unfailing supply to the innumerable springs and streams. The torrent-beds are much broken, forming beautiful cataracts, some of which are 600 feet in height. At the point where the streams enter the sea, they nearly all come in contact with cordons of sand; this is especially true of those on the eastern coast. Having no free exit, the waters set back, forming a long chain of lagoons. Some of these are connected; others are separated by low strips of land. The distance between the lagoons is so short that a continuous water-way 260 miles in length could be formed by cutting a canal of 30 miles. The whole secret of the long-sustained independence of Madagascar is to be sought in these lagoons, the poisonous exhalations from which have often driven the French from these shores.

Behind the marshes are forests which nearly girdle the island, and which breed and concentrate the miasmata. The most unhealthful region is said to be around Antongil Bay, where the woods are densest and most extensive. Back of the forests are high hills or mountains, with living waters and with a healthful climate. The largest of the Malagasy lakes, Alaotra, lies on the eastern slope, in the basin of a river which empties into the sea almost opposite the island of Sainte Marie. The longest river, the Betsiboka, could be ascended by steamers for nearly 90 miles. It is about 300 miles long, and receives the Ikiopa. Both of these streams rise on the plateau of Imerina, and their waters empty into the Bay of Bembatoka, a magnificent

port, like so many others in the northern third of Madagascar. Majambo, Narinda, Pasandava, Diego Soares, and Antongil are all capable of harboring immense fleets.

The flora and fauna of Madagascar present many characteristics which are of great interest to the naturalist. As for the flora, "in the island altogether, the number of genera now known is about 700; of these, about 80 are supposed to be endemic, as far as present knowledge extends." More than a hundred species of animals are said to exist here which are to be seen nowhere else in the world. Though Madagascar lies so near the African continent, very few of its animals are to be found on the mainland; the peculiarities in plant and animal life have given



MODE OF CONVEYANCE IN MADAGASCAR.

rise to the supposition that the island once constituted a part of the continent now submerged by the Indian Ocean. The tenrec, which is armed with barbed darts, the curious aye-aye, which forms a genus and family by itself, and the makis, or long-tailed monkey-squirrels, are found only in Madagascar. The avi-fauna is much richer than the mammalian. It comprises more than 220 species, nearly a half of which are peculiar to the island. There are no large quadrupeds—none of the larger carnivorous, ungulate, proboscoid, or quadrumanous animals; the only animal which suggests the neighboring continent is the crocodile. Deadly serpents are almost wholly wanting; but there are noxious spiders, scorpions, and centipedes.

A score or more of nations inhabit Madagascar, but all make use of substantially the same language. There are considerable dialectic variations, both in vocabulary and

pronunciation; but there is no evidence that any distinctly different language was ever spoken anywhere in the island. Malagasy is closely related to the Malayan and Polynesian languages. It is very soft and melodious, and abounds in vowels and liquids. The vocabulary has been affected to a great degree by elements imported from Africa, Arabia, India, and even from China, and by contributions from unknown sources. The number of inhabitants is estimated at $3\frac{1}{2}$ million. The Sakalava, who occupy the west, are said to be sluggish and heedless. They prefer a pastoral to an agricultural life. They are derived, probably, from intermarriages between the people of the Malabar Coast and African Negroes; in any event, they feel themselves an entirely different race from the Hova, who are of Malayan stock. The Betsimisaraka live on the eastern slope. Unlike the Sakalava, they are an agricultural people. The Betanimena, who are related to the Hova, have often appeared in the contests of the islanders with Europeans, for together with the Betsimisaraka they guard the eastern shore. The Hova occupy the plateau of Imerina, in the central part of the island. Imerina, which supports fully a million inhabitants, is a land of naked granites, red clays, moors, spiny and prickly plants, with rice-plantations on all the plains, and in all the glens and valleys, where there is water. The Hova, who are probably the latest comers among the islanders, are the lightest in color, and they are, on the average, smaller and weaker than the other Malagasy tribes. At the same time, they are more prolific, shrewder, and more tenacious. They had conquered nearly all the other islanders, they had pillaged a large part of the country, when their hopes were frustrated, and an end was made to their ambitious projects. By a treaty signed December 12, 1885, Madagascar was declared a French Protectorate; a port on Diego Suarez Bay has been ceded, to be converted into a naval station, and a war indemnity of \$4,000,000 is to be paid.

The Hova remained pagan down to a recent date, but, through the preaching of English missionaries, the court has adopted Protestantism, and imposed it on the masses. The Roman Catholics are estimated at 80,000, at the very least. Their conversion to Christianity seems not to have affected the Hova deeply, for they are as cruel and exacting as before in their treatment of the other peoples of the island. Native society among them is divided into three great classes: the Andriana, or nobles; the Hova, freemen or commoners; and the Andevo, or slaves. The Andriana are generally termed nobles, but, strictly speaking, they are royal clans, since they descend from the families of several of the petty kings who once ruled over small sections of the central province, and who lost their authority through the growing power of the ancestors of the present reigning family. The Hova form the mass of the free population of Imerina. They are made up of a large number of tribes, who generally intermarry among themselves, as do also the families, to prevent the division of land and property. The third great class of native society comprises the slave population.

The capital, Antananarivo, contains possibly 100,000 souls; it is situated 4790 feet above the sea. It is said to have manufactures of exquisite gold and silver chains and silk stuffs.

Two small islands off the coast of Madagascar — namely, Sainte Marie and Nossi-Bé — are French colonies. Sainte Marie contains about 70 square miles, with 90 or 100 Whites scattered among from 7000 to 7500 Blacks, who were driven out of Madagascar by the Hova. Nossi-Bé is French in name rather than in fact, for it contains only 240 Frenchmen (nearly all of whom are Creoles from Mauritius or Bourbon), against about 8000 Africans; it has an area of 113 square miles.



MALAGASY WOMEN.

The Comoro Isles. — This group of volcanic islands lies at the entrance to Mozambique Channel, 350 miles from the north-west coast of Madagascar, and 200 from the east coast of Africa. It comprises Mayotte, which belongs to France, and three others, all of which are protected, namely, Angaziya or Great Comoro, Johanna, and Mohilla. The bulk of the inhabitants consists of Negroes of divers hues, and of Malays crossed with Arabs. The latter have adopted Islamism, and speak a more or less idiomatic Arabic. The area of the entire group is 760 square miles, and the population 65,000.

Réunion, or Bourbon. — Réunion is 375 miles from the eastern coast of Madagascar. It is not more than 90 or 95 miles away from its sister island of Mauritius; both islands had the same founders, and both have retained the same language. Physically, Réunion may be considered as the southernmost summit of a great submarine ridge which runs north-east by Mauritius and Albatross Island, and curves round by the Seychelles, connecting with Madagascar at its north-eastern extremity. The submarine valley thus enclosed between this ridge and Madagascar has a depth of 12,000 to 144,000 feet. The island lies under the 21st parallel; it rises out of a sea buffeted by cyclones, a huge block, with straight shores, embracing scarce 1000 square miles, and having a coast-line of 130 miles. But it possesses wondrous beauties, — a lordly volcano, called the Piton des Neiges (10,069 feet), another volcano, still active, named the Burning Crater, or Fournaise, torrents flowing through the lava and basalt, cataracts falling in misty showers, tropical forests, mineral springs, a delightful climate, and a fruitful soil. Bourbon contains 20,000 or 25,000 Creoles, a stalwart, prolific race, of French speech; there are also a few Mulattoes; then follow Blacks, either pure or too slightly mixed to be classed as cross-breeds, and, lastly, coolie immigrants from different African and Asiatic regions. These coolies count for 40,000 among the 165,000 islanders. The climate is healthful, though warm. The temperature on the coast fluctuates between 53.6° and 96.8° F., with a mean of 75.2°. The Piton des Neiges is covered with snow for six months in the year. Unfortunately, contagious diseases, such as cholera and small-pox, are brought into the island by the coolies. — The capital, Saint-Denis, is a delightful town, of 32,000 inhabitants, on the seashore.

Mauritius. — In the days when this island belonged to the French, it bore the title of Ile de France; when it fell into the hands of the English, it adopted once more an old Dutch name. It is a remarkably graceful island of 708 square miles. The soil is volcanic; no peak reaches an elevation of 3300 feet. The culminating point, Montagne de la Rivière Noire, is only 3150 feet high.

Mauritius is densely peopled, supporting, as it does, 373,000 inhabitants, or 527 to the square mile. These inhabitants are Creoles, of French lineage and language, with a certain number of English; French-speaking Mulattoes and Negroes; and lastly, and chiefly, coolies brought from China and Africa to take the place of the enfranchised Blacks. Mauritius was originally covered with a magnificent forest, but this has been cleared and replaced by vast sugar-plantations, which are often devastated by hurricanes; with the destruction of the forests, Mauritius has lost its equable and healthful climate and its copious rainfall. On account of the deterioration of the country, and on account of the invasion of the coolies, the Creoles of Mauritius are emigrating in steadily increasing numbers to different regions: to Port Natal and the various Anglo-Dutch colonies of the Cape, to the Seychelles, to Saigon, to New Caledonia, and they are impatiently awaiting an opportunity to enter Madagascar in company with their Bourbon neighbors.

The Whites of Mauritius are estimated at 20,000 (?), the Mulattoes and Blacks at 100,000 (?), and the coolies, nearly all of whom are from India, at more than 250,000 (?).

Port Louis (pop. 61,000), the capital, lies on one of those excellent ports which abound in Mauritius. The town seems to be deteriorating, like the island itself.



GARDEN OF A CITY MANSION — ISLE OF BOURBON.

Mauritius has three dependencies: Rodriguez, the Amirantes, and the Seychelles group. Rodriguez is a granitic islet of 42 square miles, with 1900 inhabitants, situated about 300 miles east of Mauritius. The Amirantes and Seychelles form two small clusters of islets, rocks, banks, and coral-reefs, which formerly belonged to

France, but which are now dependencies of England. The Amirantes, twelve in number, are of coral formation, well wooded, but almost uninhabited. Scarcely a hundred men occupy their 32 square miles. The Seychelles embrace together 102 square miles, with about 16,000 inhabitants, all of whom speak the soft French Creole of Mauritius and Bourbon.

Socotra.¹— This island, which is almost as much Asiatic as African, covers 3000 square miles; it bars from a distance the entrance to the Gulf of Aden, 155 miles from Cape Guardafui, and about 250 from the coast of southern Arabia. Its granite mountains reach an elevation of 5413 feet. It contains limestone hills, and its shores are bordered with coral. It must have once formed a part of the continent of Africa. The soil is sterile and the climate dry. The inhabitants consist of a few thousand Arabs, or Arab and African half-breeds; they profess the Mussulman faith, and speak the language of the Koran. The principal village is Tamarida.

¹ In November, 1886, the British Resident at Aden, in behalf of the Bombay government, annexed this important island, and hoisted the British flag thereon. — ED.



SACHKI ON THE BANKS OF THE NILE.



A NORSE SHIP.

AMERICA.

Christopher Columbus and his Scandinavian Precursors. — America was seen by Europeans as early as the tenth century, or long before the time of Christopher Columbus. Norsemen coming from Iceland, then a prosperous country, if we can trust the historic or legendary accounts that have come down to us, settled at that date in Greenland and afterward discovered and perhaps colonized the coast to the southward which they called Vinland or the country of the Vine.

What is the story of these colonists in Green Land, and of those of the country of the wild Vine south of the Gulf of Saint Lawrence as far as Chesapeake Bay, — scattered along a shore which resembled by its fiords their native Norway and Iceland? No one knows. The old Scandinavians cherished their memory so lightly that we are ignorant of just when and how they perished. We can only surmise that they were not re-enforced, and that the Eskimos destroyed them or the motherland abandoned them, not dreaming that she was losing a world where it would be possible for her to multiply her daring race a hundredfold.

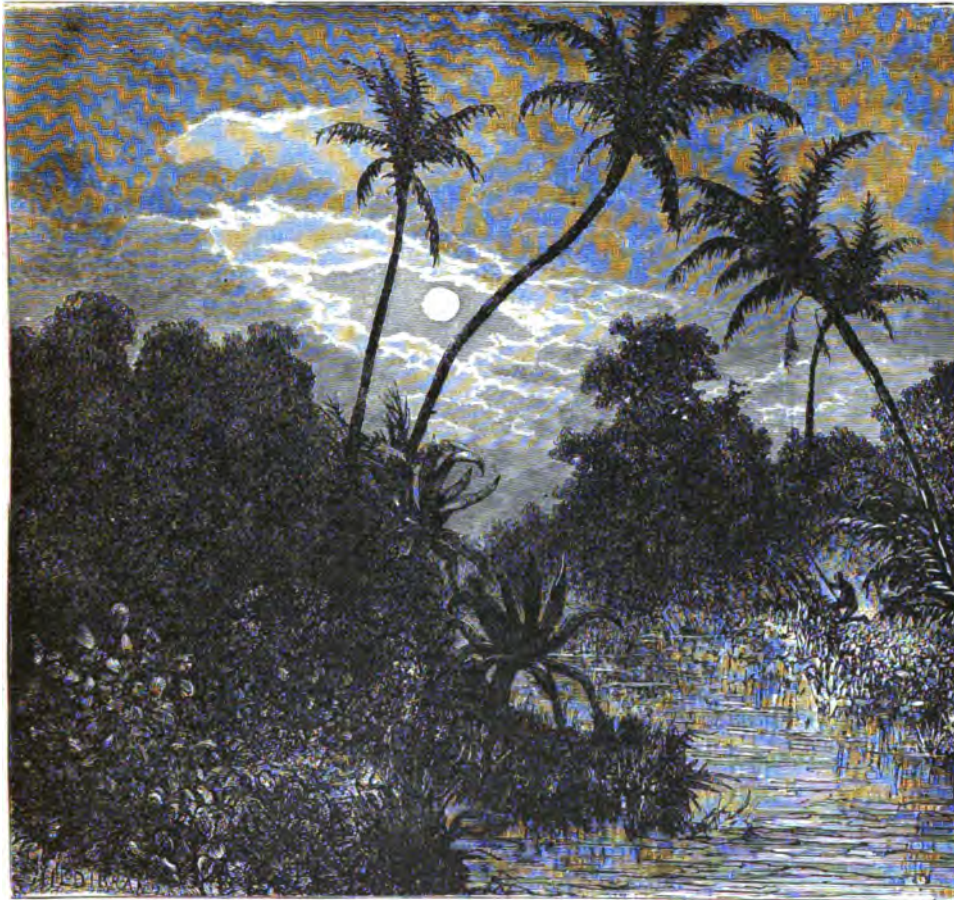
Europe had practically forgotten these Icelandic settlements when, in 1492, Christopher Columbus, a Genoese in the service of Spain, — a veteran mariner, whose mature years had been spent in the pursuit of his grand idea, — sailed for the Orient over the western sea without a suspicion that a continent barred his route thither. The immortal Italian sought India, China, the "birthplace of the spices," the Great Khan of Tartary, who, according to public belief, was wavering between Mahomet and Jesus; he found neither the spicy Orient nor the famous potentate to whom he carried a letter from Ferdinand and Isabella of Spain. But this voyage of Columbus with his three Andalusian caravels opened up to the Old World the continent which the Norsemen had lost centuries before.

Extent and Form.—The Western Continent—the “New World” only from the standpoint of European history, not from that of geology or ethnology—stretches north and south four-fifths of the way from pole to pole; almost joining the Eastern Continent in the polar regions,—reaching out a great hooked arm toward Asia, till just below the Arctic Circle they meet within thirty-one mostly ice-bridged miles, connected with Europe by a series of islands from one to two hundred miles apart,—their truly habitable portions are separated by mighty ocean gulfs. It extends in continental mass from Patagonia at the south, bathed by the Antarctic Ocean, 8700 miles to Alaska and Boothia in the Arctic; and it is prolonged by islands at both extremities—from Cape Horn to the unknown northern limits of a vast archipelago, beginning at Hudson’s Bay and sharply defined at about 125° W.—to a known extent of 9613 miles, and perhaps to the North Pole itself, 10,069 miles from Cape Horn. The northern end is in some mass less than 1000 miles from the pole, the extreme point of the southern is 2350 miles away; Alaska is but 1300 miles from the North Pole, the Argentine Republic is 3400 from the South Pole. Two-thirds of the continent is north of the equator. It comprises two sections, each commonly termed a continent; they are connected near the equator by a neck of land traversable in half an hour by a railroad train,¹—this and the great archipelago of the Antilles, separated from it by the Caribbean Sea, being probably the remains of a part of the continent once 1500 miles wide. Its total area (excluding Greenland, which is distinct from the mainland) may be given as 14,800,000 square miles; of this the northern portion from the isthmus (including the West Indies) is estimated to contain 7,950,000, the southern 6,850,000.² The entire continent comprises three-tenths of all the land upon the globe, and probably more than half the productive soil. North America is somewhat less than half the size of Asia, four-fifths that of Africa, more than double that of Europe, nearly three times that of Australia; South America is two-fifths Asia, two-thirds Africa, not quite double Europe, two and one-third times Australia. The length of America is about the breadth of Europe and Asia, the breadth of the former is about the depth of the latter from the Kara Sea to the Arabian Sea or the Bay of Bengal; but its area is slight compared with that of the eastern mass, notwithstanding the similarity in axial length. The continent of America is in fact an immense peninsula, slightly broken from the main mass: it has the southerly projection and the length and slenderness which nearly all peninsulas present. It is nearly 9000 miles long, and its breadth is less than 3100 from Labrador to British Columbia and 3150 from Brazil to Peru, while it is only 1900 from Cape Canaveral to the Gulf of California, 1725 from Rio Janeiro to Cobija, 750 from Buenos Ayres to Valparaiso, and a trifle in Mexico and Central America. The vast extent of the Asiatic mass in the line of the vapor-bearing winds (which blow substantially east and west), with its curving eastern wall of mountains, leaves its central portion nearly vaporless; the vital characteristics of America are its slender breadth and its position with its sides to the trade-winds, which give it abundance of water. The latitudinal barriers of Europe and Asia shut off the polar winds from the lands to the south, and cause in

¹ The Isthmus of Panama is 28 miles wide in its narrowest part. It is crossed by a railroad running from Panama on the Pacific to Colon on the Atlantic.

² There can be no pretence of exactness about these figures. Good recent authorities vary remarkably—350,000 square miles—in their estimates even of so accessible a section as South America; while the Arctic regions, both continental and insular, have not been surveyed with any degree of determinateness. See pages 8 and 15.

a few miles of distance a change of climate equal to hundreds on a plain; in America there is no considerable rise of land through the length of each continental section, and there are no sharply defined climatic belts except between the two sides of the one great range. The strong irregular outbursts of volcanic force in the eastern mass have bristled it with great peninsular arms, and have filled it with isolated divisions, the source of the deepest race and national distinctions; in America, much the larger part and the centre of each continental section is occupied by one gigantic



IN EQUATORIAL COLOMBIA.

plain, the link which connects them is an accessible and inviting land and not a barrier, and varieties of one race were found, by the whites, occupying the continent from Hudson's Bay to Tierra del Fuego. The interaction of so many different races and the combination of separately developed civilizations produced the splendid cultures and progress of the Old World; the monotony of a single stock, with little diversity of knowledge, made the highest advance of American races reach only to a point attained across the ocean thousands of years before.

Physical Conditions. — It is not peculiar to America that the extremes of heat and

cold increase as we recede from the equator, nor that — through ocean currents flowing from the tropics — the western side is both warmer and more equable than the eastern; and the latter has about the same climatic belts in both continents, those of China and the United States differing little. But comparing the remainder of the two continents, and still more comparing America with Europe alone, the most obvious characteristic of America's climate is its superior frigidity in every parallel from the Arctic to the Antarctic Ocean, endlessly varied as it is by local conditions. Well populated though rigorous latitudes in Europe correspond to desolate frozen moorland wastes in America, inhabited only by trappers and Eskimos; severe but just habitable ones in the latter are sunny vineyard-filled sections in the former; more southerly regions here, with alternations of short hot summers and long fierce winters, are almost tropic there; and no part even of tropical America is so hot as many parts of the Eastern Continent or its outlying islands. Great Bear Lake is cut by the parallel of Archangel; Athabasca Lake is south of St. Petersburg and Christiania and on a level with Stockholm, and Sitka is south of all three; Fort Nelson and Central Labrador have about the same latitude as Edinburgh, Copenhagen, and Moscow, Winnipeg as Paris, St. Paul and Ottawa as Bordeaux, Turin, Bucharest, and Sebastopol, Boston and Chicago as Rome, New York as Naples; Philadelphia is south of Constantinople, and Washington corresponds to Lisbon and Corfu. The twentieth parallel, which passes through the heart of Mexico, passes also through the centres of the Desert of Sahara and of India; the equator cuts Colombia and the embouchure of the Amazon, and also divides Sumatra and Borneo and Lake Victoria Nyanza; the mouth of the Congo and the main course of the Amazon are under about the same parallels. Even in the steppes of Carácas, with the highest mean temperature on the continent, the thermometer does not rise to 100°. There is no parallel here in heat to the Desert of Sahara, to the Arabian Desert, to Central India, or to Borneo. And the difference in climate is far greater than even the statistics of mean annual temperature indicate: two extremes do not make a mean to the people who bear them. Massachusetts is isothermal with northern Ireland.

In North America this is due to the great frozen ocean (that north of Europe being partially thawed by the Gulf Stream) and the archipelago of ice-fields, and to the immense polar inlet of Hudson's Bay; and southern United States shares the cold because it is not protected by the latitudinal mountains which shelter southern Europe. One vast plain extends from the Arctic Ocean to the Gulf of Mexico, and the polar winds sweep in unobstructed violence to the latter. There is probably not a spot in the United States absolutely secure from frosts; and even in the southernmost parts they are occasionally of great intensity; a "cold wave" in 1885 blighted much of the Florida orange crop and many of the young trees.

America's river systems dwarf those of all the rest of the world combined. The Amazon alone carries more water to the sea than the eight largest rivers of Asia, and the Mississippi more than all the water-courses of Europe; the navigable waters of these two and the St. Lawrence, Orinoco, and Plata systems extend to a total length of over 100,000 miles, and occupy the entire central lowlands of each continental mass, piercing to the foot of the mountain spine; the five Great Lakes of North America constitute a sea 89,000 miles in extent, over a third larger than New England.

The Continent as a Whole: Comparison and Contrast. — The structure and relations of the two sections of the continent are strikingly similar and strikingly different. Each has the same triangular outline, with the vertex to the south. Each joins

its northern neighbor by a north-western peninsula, the trend being south-east from Northern Asia, so that the Pacific is a steadily widening abyss from Behring Strait, and the centre of South America is about 2500 miles farther east than that of North America. Each has on the north a huge archipelago and a great island-barred inland sea. Each is framed of two leading north-and-south coast-ranges, — with a vast plain sloping south to the ocean occupying all the continent between, — on the west (following the rule that the largest continental chain is on the side of the largest ocean) one of vast height extending its whole length and still hot with volcanic fires, and on the east a very much shorter one about two-fifths the height of the other, run-



IN ALASKA.

ning north-east and south-west, with no trace of recent volcanic action ; and a slighter lateral chain starting in the centre of the northern end, and curving inward first south and then east till it terminates just north of the lesser range, crossing on its way the chief north-east-running river. In each the great central plain is drained by three huge river systems with no very definite water-sheds (those of North America have their head waters within ten miles of each other, and floods have mixed the waters of the Illinois and Chicago and thus connected the St. Lawrence and Mississippi; the Orinoco and Amazon have their channels connected by the deep and rapid mock-river Cassiquiare; and the Amazon and Plata systems are only three miles apart), — one running south and discharging just south of the eastern range, another

east and debouching just north of the same range (which is thus the base of a huge scalene triangle with longer watery sides), and the third running north-east and emptying into the northern ocean. Besides these, each has a northward-running river hugging the eastern side of a spur from the great western chain. The Andes and the Rockies are one, the Appalachian-Alleghany range corresponds to the many-named Brazilian chain, and the Laurentides form a division analogous to (though insignificant beside) the mountains of Venezuela and the Guianas; the Mississippi-Missouri system and its valley are giant brothers of the Plata-Parana-Paraguay and its plain, the Saskatchewan with the Red River of the North bears the same relation to its fellows as does the Orinoco, and the Magdalena is a reduced copy of the Mackenzie. Furthermore, the eastern chain in each is rather a many-ribbed plateau than a mountain wall, and is far enough from the coast to allow of many considerable rivers, very similar in character and size, flowing to the Atlantic.

The differences are partly physical, and partly of location and consequent destiny. More than half and the best half of South America lies in the tropics; all the United States and habitable Canada lie in the Temperate Zone. One-fourth of North America is a polar waste, and the habitable areas of the semi-continents do not greatly differ, if the vast impenetrable forests of the Amazon be considered as habitable. The southern end of North America lies in a warm tropic sea, that of South America in the polar ocean. The northern portion has much more of cultivable soil, and much less of climate subversive of human energy or destructive of human life: there is no parallel north of the tropics to the death-exhaling coasts and marshes of Central and South America, and the llanos, selvas, and pampas of the great central plain of the latter are of slender value beside the Mississippi Valley, the largest continuous body of agricultural land upon the globe.

An important difference is in the character of the coast-line; and in this too the northern continent has vast superiority. Each so differs from the other and so resembles the corresponding section of the Eastern Continent in this, and the two continental masses *fit* so remarkably, that a plausible theory holds the Atlantic to be a channel formed by a convulsion which rent one great continent in two. That ocean is slight compared with the broad gulf of the Pacific: it is but 1700 miles from Cape St. Roque in Brazil to Cape Palmas in Liberia, and about 2000 from Newfoundland to Ireland; while from San Francisco to Yokohama is 5500, from Quito to Singapore (almost exactly antipodal) 12,500, and from Valparaiso to Sydney 8000. The great eastern projection of South America extends toward the Gulf of Guinea, the great western projection of Africa toward the Caribbean Sea and the Gulf of Mexico, and the great eastern projection of North America toward the Bay of Biscay; and the same closure toward each other (about 45°) which would bring East Brazil against the mouth of the Congo, would bring Senegambia among the West Indies and make Labrador and Ireland one. In configuration, South America corresponds to Africa while North America is akin to Europe.

The natural commercial relations of this continent are with Europe, by virtue of the shorter distances, the prevalence of eastward-blowing winds on both sides of the continent, the lack of suitable harbors on the Pacific side between the Canadian border and southern Chili, and the fact that the bulk of production and population here must always be east of the Rockies. In this regard North America is doubly favored, and South America doubly hampered, each by its own character

and its eastern neighbor's. The former faces at easy distance Europe, the commercial head of the world; its companion lies near to barbarous, iron-bound, backward Africa. Moreover, the majority of the decent South American harbors are either along semi-polar desert Patagonia or on the pestilential northern and north-eastern coast. She that hath, to her is given.

Summing up, then, the results of configuration and climate, we find the natural regions of the continent substantially as follows:—



THE DELTA OF THE PARANÁ.

The Andes-Rockies.—The main axis of America is the gigantic mountain chain which ribs the entire western side of the continent from Cape Horn to Behring Strait. It is not merely a dividing wall: it is a vast formative base of the continent, a thousand miles broad, to which the country rises in swells and slopes for immense distances before it is called a mountain at all, most of the western Mississippi Valley being really its eastern slope; in some aspects, it *is* the continent. Its mass alone is of continental volume: in South America it amounts to over 1,000,000 square miles, in North America to 2,500,000, or nearly a third of the northern continent and a

quarter of the whole. It includes in itself every gift of nature and character of soil and aspect of country; it is a microcosm. It is a polar desert, a forest, a wheat-field, a vineyard, a sugar and coffee plantation, a spice orchard, a tropic jungle. It shares the climate of every latitude almost from pole to pole, but profoundly modifies each, nourishing vineyards on one slope while the other is palsied by the breath of the Arctic, blasting one into a desert while the other is rich with fertilizing vapors, cooling the tropics into comfort and healthfulness by its snow-covered masses. It makes California a second France while New England is a second North Prussia; it makes Mexico another Italy in the latitude of the Great Desert; the Indians of Western Brazil build fires for comfort, near frozen lakes and streams, almost on a level with Java and the Congo. It has vast provinces of rich fertility, others as vast of alkaline sand and naked rock; it has great lakes and considerable rivers that begin and end within its own mass; it is wholly sufficient to itself. If it has not been a dividing line of races like the Old World ranges, it has been the dividing line between culture and savagery, and it developed the only aboriginal civilizations of America.

The South American portion of this immense range, known as the Andes, is by far the loftiest and most imposing, — strangely enough, the smaller section of the continent has the mightier mountain and river systems, — and forms the highest mountain mass with the highest summits on the globe except the Himalayas. Rising swiftly from its beginning among the Fuegian rocks, its Patagonian course has peaks of 8000 feet; passing onward through Chili in great swells, ten, fifteen, twenty thousand feet, it culminates in the mighty nevado of Aconcagua, 22,422¹ feet high, the last 10,000 clothed in eternal snow, — the highest summit in America. Dividing into two parallel arms or *cordilleras* upholding a province between them, from this point to the isthmus it is no more a ridge, but a stupendous ocean of rocks, extending hundreds of miles into the interior of the continent; flanked and ribbed by snow-clad ridges rising from 20,000 to 23,000 feet into the air, inclosing sometimes two and sometimes three imperial valleys on the same broad base, — valleys as regards their towering barriers, but mountain crests as regards the coast and plain, — the seat of the remarkable native culture extirpated by Pizarro. It bifurcates or trifurcates, then forms a knot only to be severed and knotted again, and so on eight different times, with here a plateau on two ridges and there two lofty plains on three; with enormous mountain causeways uniting the parallel chains across the table-lands or valleys, and crossed by passes — often frightful and all but impassable gorges — at a height equal to that of the loftiest peaks of Europe. During its entire South American course, it hugs the Pacific so closely — within a hundred miles or less — that no considerable stream is formed by its drainage on the western side.

Central America and Mexico are little but the range itself, its curves and those of the southern continental coast repeated with curious fidelity by those of the great coralline archipelago which stretches from Venezuela to Florida; sinking twice into lowlands along the Isthmus, it spreads out northward into the great plateau of Anahuac, 6000 to 8500 feet high (the seat of that other native culture uprooted by Cortez), flanked by volcanic peaks of nearly 18,000 feet. At this point its main ridge, thenceforth known as the Rocky Mountains, — though the Mexican portion is often termed the Sierra Madre, properly the name of a north-eastern spur, and the Canadian section is sometimes called the Chippewyans, — suddenly leaves the ocean far to the west, and for its remaining 3500 miles keeps several hundred and even a

¹ Good authorities say also 23,910.

thousand miles away, its drainage forming rivers of vast volume, like the Columbia, the Fraser, and the Yukon; where the north-western coast curves, it curves too, and runs westward through Central Alaska till it faces its even greater congener across Behring Strait. But here too it separates into cordilleras nearly filling the space between it and the ocean, and between the main range and the great Sierra Nevada arm it incloses the tremendous desert of the Great Basin and the cañons;



TAPIR HUNTING.

while the still lesser Coast Range, prolonged in the Cascade beyond the Columbia, follows the shore all the way around till it ends in volcanoes in the Aleutian Islands.

North America. — In the polar regions the vapors can create little but snows and glaciers and ice-bound rivers. Alaska and Northern Canada are an interminable worthless moor, the centre akin to Siberia and Finland in its flatness so extreme that the same lake or swamp will be the source of two or three rivers, a flood will confound their waters, and a high wind will reverse the direction of a current; in its deep sponginess of soil, only half created from the receding ocean; in its complicated net-work of

lakes, which represent the remnants of the same ocean. It is a mass of frozen lakes and frozen rivers and frozen swamps, mosses, and in the southern portions a few stunted firs and birches; thawing on the surface above eternally frozen subsoil for a brief fierce summer, unless clouds prevent its coming at all, — the heat rising to 120° at times, — and putting on a coat of green (and breeding swarms of such mosquitoes as made De Soto's men tear their flesh in the vicinity of the tropics), soon extinguished in a winter of eight or nine or ten months' duration, sometimes a hundred degrees below the freezing-point.

For several hundred miles southward, say to 44° N., extends a climate not fatal to civilized energies, but east of the Rockies enduring great alternations of brief heat and predominant cold. In the precarious warm season of only four or five months the thermometer often ranges above 100° in the shade, while during the long severe winters it is often for considerable periods thirty to forty degrees below the freezing-point, — occasionally sinking suddenly even to 70° or 75° below, accompanied by violent storms of wind and sometimes fine piercing snow,¹ almost reducing the inhabitants while the "cold wave" lasts to a state of hibernation, and paralyzing business. But the electric dryness of atmosphere usual in the winters of this section, its freedom from raw damp winds and fogs, makes it more endurable than many nominally milder climates; great cities have grown up there (as St. Paul-Minneapolis and Montreal), and it will have an important share in the brilliant American future. On the eastern side the polar current is deflected from Canada by Newfoundland, and the climates of St. Paul and Ottawa do not greatly differ. The Pacific Coast region, sheltered by the Rockies, and bathed by the warm current of the Kuro Shiwo (the Gulf Stream of the Pacific), has except in the northernmost part a climate as mild and equable as that of Ireland (the isotherm of 50° N. in British Columbia is about the same as that of 40° N. close to the northern boundary of Virginia, and the extremes of temperature are only 50° on the former coast against 110° on the latter), and is a land of heavy and protracted rains (80 inches annually in South Alaska) and consequently of magnificent forests, of grain and cattle and fruit. The central section, comprising the southern tier of Canadian provinces and the northern tier of States of the Union, is the greatest timber region and wheat-field of North America.

South of this imaginary band lies the great temperate section of the northern continent, comprising about nine-tenths of the United States apart from Alaska. This itself, however, may be subdivided, though not by any definite line, into two sections of firmly marked differences of climate and production, the northern having very distinct affiliations with the semi-Arctic and the southern with the tropic regions. The former, which east of the Rockies roughly coincides with the basin of the Ohio, has in less degree the hot but precarious summers and reliably cold winters, the generally dry and bracing atmosphere, and the general character of vegetation and production, of its northern neighbor; but except for brief "hot waves" the heat does not rise much above 90°, and its drop below zero F. is an equally brief visitation. The southern half rapidly assumes tropic elements: the seasons are rather "wet" and "dry" than winter and summer; the atmosphere in summer has a languorous oppressiveness which relaxes the energies, and the houses are built in a loose and airy way for comfort in prevalent heat; the vegetation is luxuriant and characteristically tropic, — palmettos and cypresses and magnolias and huge swampy jungles, — and the productions are largely cotton, tobacco, rice, and sugar, vines and peanuts and

¹ These sudden falls of temperature, with high winds, are known as blizzards.



MAMMOTH HOT SPRINGS IN THE YELLOWSTONE NATIONAL PARK.

oranges. As before, the Pacific slope is individual: California extends from the latitude of Boston to that of Vicksburg and Savannah, but its climate lacks the raw east winds, the bitter winters, and the fervid summers of New England, and the enervating atmosphere of the southern Mississippi and coast, and is the finest of any considerable section in America.

The great central plain of North America, barred from Pacific and Atlantic vapors alike, escapes being the most tremendous desert on earth with a little fertile strip in the centre, — a second Egypt, — through the cutting off of half the breadth of the continent by the Gulf of Mexico just where the trade-wind shifts to the east, and by the Rocky Mountain wall, which turns the vapors north and east along the valleys of the Mississippi and Ohio. Their direction being away from the west, the land for hundreds of miles to the east of the Rockies, from the northern to the southern boundary of the United States, though good enough in itself (much of it being in fact the same prairie so fertile to the eastward), is worthless without irrigation, receiving sometimes no considerable rain for years. Close to the mountains, this land is foot-hills and *mesas* (table-lands); farther east, it is a vast rolling plain with the lonely immensity of the ocean, covered with wild grass, but almost treeless except for the thin line of poor timber fringing the banks of the streams, which in parts are merely broad shallow canals in the sand.

East of the Mississippi the prairies rise to a plateau at the base of the Alleghanies, enriched to a garden by the vapors of the Great Lakes; in the centre is the beautiful forested basin of the Ohio River system, the one great eastern affluent of the Mississippi; for 1300 miles along both sides of the latter its alluvial bottom-lands extend to the Gulf; and around the entire southern and south-eastern coast of the United States, from the Chesapeake Bay to Mexico, stretches with a breadth of fifty to a hundred miles a belt of low sandy plains, vast marshes, and pine forests. The Alleghanies are composed of parallel ridges inclosing high fertile plateaus, one of which, the great Appalachian Valley, extends in a curve for more than a thousand miles, from Maine to Alabama. Their eastern slope is comparatively short and steep, and is drained by countless rivers of varied beauty, about a dozen of them from three to five hundred miles long.

Mexico and Central America and the Antilles.—Receiving the vapors from a southern sea upon its high cool table-lands, Mexico rejoices at once in tropic luxuriance and a temperate climate; the valley of Mexico and much of Central America is a "perpetual spring." The peninsula of Lower California—a central ridge with *mesas* and deep valleys of small streams, running from a central ridge down to forbidding and nearly harborless coasts—is in all publications set down as a miserable waste of rocks without soil, with here and there a patch of tropic fertility: in fact, it is a rich extension of southern California in soil and climate, and like that region, needing irrigation to some extent. The thin poor soil of most of Mexico cannot be fertilized even by tropic vapors; and Central America has much pestilential lowland where white men can never permanently abide,—the margins of the great canal have been one awful graveyard of laborers and supervisors during its construction. As befits their position as a connecting link, these regions unite the physical characteristics of the two semi-continent, the coast resembling the northern and the interior the southern, of which they are wholly a part by climate and natural productions both vegetable and animal, as well as politically. In truth, not the Isthmus but the tropic of Cancer is the real dividing line between North and South America. This

is even more strikingly shown by the West Indies, which, bathed by a warm ocean like the true Indies of the East, rival them in fertility and the intensity of color and flavor of their products.

South America. — Probably no part of the world enjoys so great a variety of climate within such brief ranges of space: it has no one which can be predicated of it as a whole, nor can it be divided into climatic bands. The elevation controls the temperature along the borders: it is hot on the coast, moderate on the slopes, and cool to cold upon the summits of the plateaus, — the great mountains of the coast exhibiting from base to summit a specimen of every climate from fierce tropic heat to the eternal winter of the polar regions; while in the interior, special causes vary it endlessly, and climates of perpetual spring, perpetual summer, and perpetual chill, perpetual drought and perpetual damp, may exist all within a few miles of each other.



A FIELD OF SUGAR-CANE.

The eastern trade-wind carries wealth to its eastern side, follows the Amazon to its source and at once cools its equatorial heat and makes its basin one gigantic forest, sweeps over the low-lying Isthmus and diffuses plenty along the western side; but the western projection of the continent deflects it uselessly into the Pacific, and the coast becomes at once a waste of sand and stones and weeds. Western Ecuador is a garden, western Peru and northern Chili are deserts, the Desert of Atacama ending on the south a strip of desolation 1250 miles long, though for another hundred miles or so the country is wretchedly poor. Here the wind again shifts to the west, and the scene is changed as magically as before; southern Chili becomes a fairly watered and wooded agricultural country, while Patagonia east of the mountain is a semi-Arctic desert, and much of the Argentine Republic an arid steppe.

The mountain regions of South America fringe it about from Cape Horn to the mouth of the Plata. The Andes alone, with coast and ridge and table-land, form two

republics and much of two others; the mountains of Venezuela and the Guianas are the hope of their future, not the death-breeding alluvium and withering heats of the coast, nor the alternately parched and flooded pampas; and eastern Brazil is an immensely magnified western New England, with the hills and petty table-lands and steep narrow valleys and swift brooks many times enlarged, and with one magnificent plateau nearly four times the size of all New England.

The north-eastern part of South America is a great river-girdled island: on the east the ocean, on the south and west the Amazon and Negro, on the north and west the Orinoco, and closing in the western outlet, the deep alluvial channel of the Cassiquiare, which takes a vast brown flood of the Orinoco's early waters to the Negro. This insular yet not insular mass, Guiana in its broadest sense, comprises the little Guianas of England, France, and Holland, — steaming jungles and forests, and tropically fertile delta-plains and uplands: first the sea-coast, a fringe of pestilence, then a plain of the richest loam, then luxuriant forests, then land rising in terraces and low ridges to a wall 8000 feet high where the rivers join, — and also parts of the llanos and selvas.

The Llanos (flats) of the Orinoco are the basin of that river and its western feeders back to the Andes, containing over 300,000 square miles. These are endless plains, as flat as the ocean or as southern Hungary, where droves of cattle are pastured by the *llaneros* or herdsmen; sun-baked steppes cracking with dryness till the floods descend from the mountains, and then suddenly overflowed along the banks of every river with seas of muddy water swarming with fierce alligators and electric eels whence the Indians, their only permanent inhabitants, take refuge in the occasional trees. The floods subside, and leave chains of miry pools and a coat of fertilizing slime which covers the land for a short time with a carpet of luxuriant vegetation and with a steam of fever-laden vapors; but it soon resumes its old aridity.

The Selvas of the Amazon cover the interior of the continent along the course of that inland sea, ten miles wide 500 miles above its mouth, with sea-monsters in its bosom and sea-fowl screaming above it, — rather a group of parallel but interlocking rivers than a single river: they are an evergreen forest unbroken for a diameter of 1100 miles, — the greatest on the globe, — so dense that the foot of man cannot traverse them, linked and twined with festoons and ladders of creeping and climbing parasites, and crowned with brilliant flowers which have made their way to the top, pierced by water paths in endless tangles (called *igarapés* or bayous) connecting thousands of lagoons, and swarming with monkeys and gorgeous birds, with bears, and jaguars and panthers. Here and there are bits of grassy meadow; but all this enormous tract is practically as unbroken by civilization as the Great Desert or the Arctic moors. The forests of South America cover two-thirds of its surface.

South of the selvas, beginning near the invisible water-shed between the affluents of the Amazon and those of the Plata, and running in the centre of the continent between the Paraguay and the Andes, in Bolivia and the Argentine Republic, is El Gran Chaco; partly a tamer and less luxuriant selva, partly grassy prairie, in the south an arid desert merging into the pampas of the Argentine Republic. The latter are deteriorated llanos, — cold dry plains covered with long wild grasses and thistles, where vast droves of horses are pastured; very much like the country east of the Rockies, excellent deep alluvial soil, but almost useless for lack of rain: the western trade-wind is shut off by the Andes, but east winds prevent utter ruin. Not a stone can be found for hundreds of miles; but on the south are the stony,



ON THE AMAZON.

gravelly, clayey steppe-like plains of Patagonia, then the continent narrows down, and the Antarctic iciness and snows and storms prevail; and the southern end of this melancholy land is the dismal archipelago of Tierra del Fuego, — part of a greater one fringing the coast from south Chili to Cape Horn, — in the west, rocky mountains clothed densely at the base with evergreen beeches, and a climate like an Alpine Scotland, of eternal mist and snow and rain and hurricanes.

The Natives. — The differences in the history and future of the settlements in America have been greatly aggravated, though not wholly created, by the character and distribution of the aborigines found here. Besides the Eskimos, a distinct race of enormous antiquity, who remained in the polar regions and have had no effect outside, the continent was more or less occupied — thickly on the tops and sides of the great range within the tropics and to the south, very thinly elsewhere — by countless tribes of mostly dark-skinned natives, not resembling any others on the globe, and with traces of a fundamentally common type in physique and speech: though varying in color from nearly white to dull red, dark green, brown, and yellow; in stature from the dwarfish Peruvians to the very tall Patagonians; in disposition from pliable adaptability to granite inflexibility, and from mild placableness to the vindictive ferocity of tigers; and in culture from the primitive hunting stage, without political or social cohesion, to organized royal government, with developed agriculture, manufactures, roads, architecture, military discipline, public charities, and a system of written language.

Their varieties and the details of their condition cannot be set forth here. The material points are that the French and English fell in with races of extreme ferocity and intractability, still in savagery, the Spaniards with gentler and more civilized ones including two real nationalities, and the Portuguese with unorganized savages of the same type as the latter. Each attained the mastery in a different way. The French intermarried largely with them, and also attempted to form a confederacy of them under French leadership, which was a failure owing to their savage instability of character and to the destruction of the leading tribes by the Iroquois; the net result is a considerable Indian strain in the French Canadian, of no conspicuous value, and in the north-west a large number of rather turbulent and unmalleable half-breeds, — the most keen, swift, enduring, and resourceful of hunters and trappers, though generations of bush-ranger life have probably more to do with the result than the Indian blood. The English neither fraternized nor intermarried with them, fought them, crowded them back, bought or seized their territory, and remain utterly unaffected in blood or history by contact with them: they have been to the United States a vexatious problem, but never an influence. The Spaniards enslaved them to the political and moral ruin of both races, mingled blood with them with unprosperous results, and have yearly atoned for the atrocities of Spanish conquest by a struggle with the anarchic conditions which have resulted from it. The Portuguese also intermarried with them to as little profit; but the Indians were too scattered and untamable to make the Spanish system possible, fortunately for Brazil.

At the present time, there are a little over 100,000 Indians in Canada, all harmless hunters, trappers, fishermen, pilots, guides, etc.; they have generally escaped warfare with the whites by having nothing the latter wanted. The United States has nearly 250,000: about 75,000 in the "Indian Territory" (composed entirely of reservations of different tribes), where, protected and educated, they are rising into civilization, and will become useful citizens; the remainder — aside from the peaceful

remnant of the comparatively civilized Zuñis in New Mexico — mainly in scattered reservations in the far West, including those of two or three tribes who have already avenged, in massacre and mutilation and frightful outrage, many of the wrongs which the Indians have endured since the landing of Columbus. About a third of the entire population (11,400,000) of Mexico are Indians of supposably unmixed blood; perhaps more than fifty per cent in Peru, something less in Bolivia, and considerable masses in the other South American states, none of them very dangerous. The Indians and half-breeds together greatly predominate over the whites all through South



SIoux VILLAGE.

America, and the latter are in some of the states the basic element of society, in their character and disposition being involved the political and social future of the countries.

Nature of the Different Colonizations. — The settlements of Leif and Thorfinn in southern Massachusetts early in the eleventh century, and their abandonment through the hostility of the Indians, the trade carried on along the Atlantic coast for some centuries, and the continuing tradition of these regions among the Norsemen, though they very likely encouraged Columbus, did not hasten the final rising of the curtain by an hour. It is not necessary to detail again the mistaken notions perpetuated in the name "West Indies" and the race name "Indian," grotesquely meaning things nearly antipodal to India, as "American" means nearly everybody on the continent

except the aboriginal inhabitants; nor how a clever map-maker stood godfather to the New World in place of the immortal pioneer; nor the steps by which the four great maritime powers of Western Europe shared the continent between them, and the way in which they mostly lost their shares in the vulgar sense though retaining them



A NORTH AMERICAN INDIAN.

in a far more important one, — England wresting France's portion from her and almost immediately losing her own, but still keeping her rival's, Spain and Portugal giving birth respectively to a crowd of republics and a magnificent empire: but the character of the peoples and colonial policies bear directly on our purpose, for America is what it is because those states and races were what they were, and took posses-

sion of the parts they did. Sensible colonial policy, indeed, was a thing unknown to the world for centuries after 1492,—even the most enlightened countries held it as self-evident that all colonial trade and production, except trade with and production appropriated by the mother country, was so much subtracted from the business of the latter; but national and governmental characteristics varied enormously the lines of that policy, and accidental circumstances and exigencies varied its application still more widely. In one respect there was no difference: none of the powers had at the



A SOUTH AMERICAN FARM.

outset any colonizing purpose at all. They were looking only for revenues from trade preserves (England went so far in the case of Newfoundland as to prohibit permanent residence altogether), and the early settlements were simply trading posts, fishing stations, and mining camps.

The occupancy by the Spaniards was almost wholly evil both in methods and results; and the reasons are on the surface. They were the only invaders who found a people at once mild enough and malleable enough to work into harness as slaves:

they speedily became a small ruling caste dominating a mass of enslaved natives and a most unmanageable and uncultivable race sprung from the miscegenation of the two, and a third element of trouble was added when they worked the natives to death in the mines and imported Guinea negroes to supply their place, thus inaugurating negro slavery in America. Progress would have been in any case impossible either for masters or subjects, for the unstable equilibrium demanded a vigilant tyranny and iron repression which made a mere military camp of the one and a drove of sulky animals of the other; but these elements of evil were fatally reinforced by the primary character of the home government and the settlers, and the object of the settlement. The first was a benumbing political and ecclesiastical despotism; the second were half pirates, half crusaders, part of whose very blood and bone was a ferocious bigotry bred in by hundreds of years of desperate war for a national existence which was identical with their religion, and a large part of them were the riffraff of the country; the third was chiefly to work mines, of which in rude development Mexico was full, and agriculture was only carried on as an agency to that end. The outcome was a system of colonial subjection so terrible and thorough-going that it has never been equalled save by the state of Ireland in the eighteenth century, and its effects will be vital for ages to come. The consistent and successful endeavor was to make the colonial population a herd of cattle driven by officials of Spanish birth: education, office-holding, the cultivation or manufacture of anything produced in Spain, was forbidden to them; the very vines and olives were rooted up. Posterity has reaped the fruit they planted: of all the states which make up Spanish America, only one, under the guidance of a sagacious aristocracy, has displayed any considerable political stability; and some of them have nearly justified Bolivar's prophecy that they would continually relapse into the primitive state of human society, a chaos of warring atoms.

The Portuguese occupancy had originally the same character as the Spanish: there was the same craze for mines, the same butchery for the good of souls, the same importation of negroes. But for some reason (probably the refractory nature of the mines and the splendid fertility of the soil) it very early took on a totally different cast, and presents striking points of similarity with the English. Both were predominantly agricultural; both had to push back tameless savage natives instead of enslaving partially civilized ones; both favored education instead of suppressing it; both escaped paralyzing tyranny from the mother country more through the latter's home embarrassments than from its superior enlightenment; and both have swarmed over their mountain slopes and spread westward through the great valley. It is proof of great national vitality in Portugal to have retained Brazil at all; for its national existence was subverted by Philip II. in 1580 and not regained till 1640, and the Dutch had gained a tenacious foothold at the time of its revival. But this extinction created the Brazil of to-day: growing up in a self-reliant pioneer independence, the new generations could not be reduced to a slave-driver's gang, and Spain did them the wonderful favor of letting them alone during this interregnum. Later, in Napoleon's time, Brazil had the most remarkable fortune which has ever befallen a province, of becoming for years the homestead of its own head government while the mother country was in the hands of foreign invaders, and of course it received a vast impetus therefrom. In its steady progress and orderly government, it shows a contrast in results matching the contrast in circumstances with the Spanish colonies.

French Canada was a gigantic experiment in political and religious paternalism

and feudal transplantation, tried with every appliance for success and ending in ruinous failure. The colonists were not allowed to own their farms, but were tenant-farmers under great seigniors to whom they paid rent, the whole paraphernalia of feudality having been transferred to the new country. This system, depriving the inhabitants of the chief incentive to labor, has invariably ruined every colony, English or other, to which it was applied; it exists in the older countries only as a survival too deeply intertwined with other social facts to be readily uprooted. But the paternalism would have been fatal under any circumstances. The colonists were not indeed to be slaves like the Spanish, but obedient children of the Crown and the



A FRENCH AND INDIAN HALF-BREED.

Church : material prosperity was to be secured by submission to the minute ordering of municipal and business transactions by the government, and spiritual blessings by humble obedience in social matters to the priesthood. The latter may have been plentiful, but the former was ruined and America lost to France. The scheme was carried out with wonderful thoroughness. The Huguenots were refused the permission to emigrate which they eagerly craved, and kept at home for plunder and massacre (Louis XV. told them he did not propose to let them evade his control and set up a republic elsewhere), and the colonists were carefully picked from devout Catholics who preferred to stay at home; spiritless and homesick exiles, a hopeful beginning and a promising ancestry for a pioneer state in a savage wilderness. The pettiest details of business were regulated by prescripts and monopolies, bounties and fines, and the effect of natural laws and competition carefully nullified, till universal bank-

ruptcy and distress became chronic, and business practically did not exist. Public meetings were jealously restricted and often forbidden, and the most private details of social life were meddled with in a microscopic and spirit-breaking way. The only exception to the general inertness lay in the young men, the most energetic of whom broke away from tyranny and espionage, escaped into the forest, and became trappers and bush-rangers despite heavy penal laws and the curses of the Church, took Indian mistresses, and filled the Canadian forests and the wigwams of every tribe north of the Great Lakes with a hardy race of half-breeds. These semi-outlaws greatly obstructed the thorough operation of the system: but it did its work so well that the English invasion of Canada in the war of 1755-60 found only 65,000 people there after a hundred and forty years of settlement, against ten times as many in New England; more remarkable still, that when the English colonies revolted fifteen years later, the one part of England's possessions which made no effort to rise and cost no effort to hold was the province of aliens lately torn from their own countrymen, and that the American expedition to Quebec, which counted on Canadian assistance against their English conquerors, had to fight its battles alone.

The English colonists were neither buccaneering zealots nor homesick and repining exiles, neither crusaders of a militant church nor protégés of the government; the most energetic of them emigrated expressly to be rid of both, and all alike, from noblemen to farm laborers, from royalist high-churchmen to Cromwellian Puritans, from the democratic yeomen of New England to the great "county families" of the southern colonies, had the tradition of centuries of constitutional liberty in their blood, and at the time of the Revolution owned allegiance to a dynasty whose title rested on popular election. Neither the Crown nor the Church at their strongest had the crushing strength of the Burgundian dynasty or the Holy Congregation; and as the rulers were mostly either engaged in a struggle with their subjects or too unpopular to do more than keep themselves in place, — the near establishment of a blighting colonial tyranny in the seventeenth century being averted by the overthrow of the Stuart dynasty, — the Church had no carnal weapons to enforce her claims. In the eighteenth century, also, the colonists' help against the French was too indispensable to the home government for it to afford to oppress them. For these reasons, a string of wealthy colonies containing over two million white settlers (a large percentage of them from a stock that became colonists from an untamable disposition and stubborn intensity of conviction and purpose) grew up in America during over a century and a half in a virtual independence scarcely broken except by spasmodic and easily evaded attempts to enforce outside authority, when suddenly their prosperity was threatened with destruction in the supposed interest of England, which attempted to reduce them to the state of political and industrial nullity in which the French and Spanish colonies had been reared from the first. This manifestation of the economic ignorance of the day resulted in founding the greatest republican state — and which will in a few generations be the greatest nationality of any kind — that ever existed on earth; which has bought out the holdings of three powers in North America, seized vast quantities of another's, and is possibly not at the limit of its territorial expansion.

The colonizations by other powers, successful or attempted, have not seriously influenced the future of the continent. Holland came nearest to leaving a permanent impress: her New York settlements have been important social and political factors in that section, and her Brazilian settlement struck deep roots. Sweden made a weak

grasp at the country near New York, but could not retain it. The Russian fur-trading settlement in Alaska and the Danish fishing-hamlets in Greenland have been of no moment.

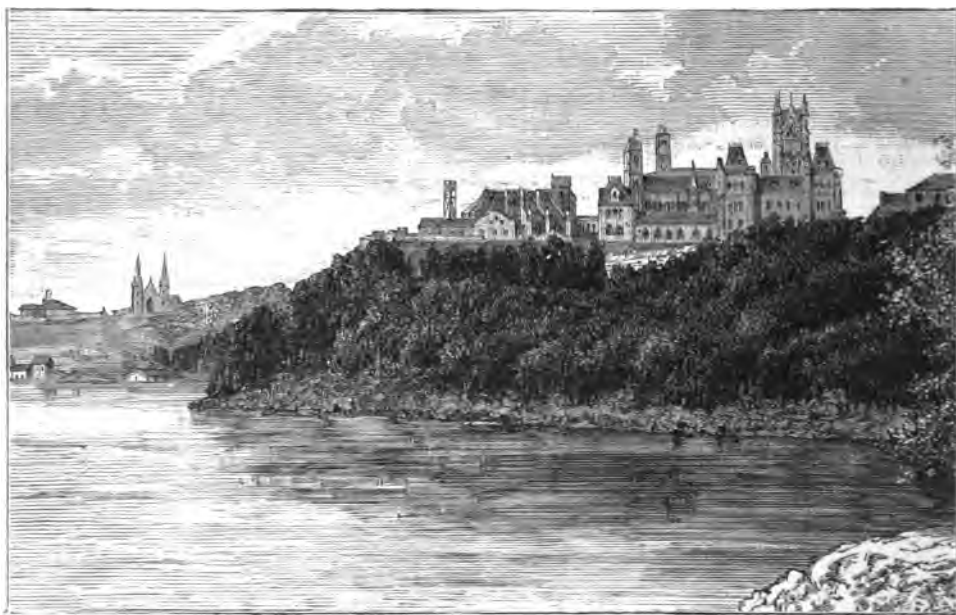
Its Present Condition. — America, then, after the flux and scramble of nearly four hundred years, presents the following aspect : —

Foreign Holdings. — The direct possessions of European powers on this continent are now as follows : — England has a nominal sovereignty over Canada (which theoretically extends to the North Pole) and Newfoundland, British Honduras on the Yucatan peninsula, British Guiana, a swarm of the West Indies including the important ones of Jamaica and Trinidad, the Bermudas, and the Falkland Islands off Patagonia. France, out of her once vast possessions, retains vexatious settlement rights on Newfoundland and a group of little islands near it (St. Pierre and the Miquelons), a few of the smallest West Indies, and the penal colony of French Guiana reminiscent of the revolutionary *émigrés*. Spain holds Cuba and Porto Rico, in the Antilles; Portugal has *nothing* left. Holland has a few of the West Indies, and Dutch Guiana. Denmark owns St. Thomas and a couple of other islands in the West Indies. As the United States many years ago gave virtual notice to European powers that it would allow no further extension of their holdings on this continent, either by the planting of fresh colonies or the conquest of independent states, no other power will be added to this list unless by purchase or cession from present owners.

The United States. — All the continent north of the Gulf of Mexico is the heritage of Protestantism and of English law and political institutions. A great majority of the habitable land, and nearly half of all the northern continent, is occupied by a gigantic democracy which is absolutely English in the whole framework of society, in speech and manners and traditions. There are a few alien elements not yet wholly absorbed or extinct, — aborigines, Spanish and Creoles in small masses resisting assimilation, a curious law-defying ecclesiastical despotism in the Great Basin which the government is now rapidly breaking up, — but all these are only as sand-dunes in a vast rising flood. It has no titles and no class privileges, and no form of property confers political advantages or possesses legal immunities above any other. It has no established church, imposes no obligation to maintain or pay for maintaining religious services at all, and places no restriction on the public observance of any religion whatever, unless its rites are immoral or its obligations illegal. A thorough system of unsectarian and nearly dereligionized public education, existing by the separate action of each State, — for which taxes are imposed in all, and which is compulsory in many, — is an agent of enormous power in fusing all the inhabitants into a feeling of national unity. Its southern inhabitants are overflowing into Northern Mexico, and three or four of the States of that republic are becoming so “American” in population that its political condition and governmental policy will be vitally affected.

Canada. — All the continent north of the United States — except Alaska bought by the latter from Russia, and the island of Newfoundland which is a separate English colony — constitutes a dependency of England, independent in all but name, an ornamental governor-general whose nominal powers are strictly contingent on his never exercising any real authority, a life Senate nominated by that official instead of an elective one, nominal inability to make war fully compensated by entire ability to force the mother country to make it and pay for it, and power of the Imperial Parliament to repeal its ordinances, rarely exercised unless ecclesiastical bigotry is aroused.

It has even the power, injuriously exercised, to enforce commercial restrictions damaging to the mother country. It is practically an independent constitutional republic of the English model, — a decorative head, an unchanging upper house, and ministries changing with party supremacy, — but with a federative system copied from that of the United States, the Parliaments of the separate provinces answering to the State governments, and the Dominion Parliament to Congress. But its English political fabric is by no means accompanied by a solidly English social or legal fabric. This element, indeed, is in the ascendant, and all immigration from Teutonic stocks is a re-enforcement for it; but over a third of the entire population, and four-fifths that of the Province of Quebec, are French-speaking Roman Catholics, the alienation of speech perpetuated by printing all public documents in their language, the fusion of inter-



OTTAWA.

marriage practically impossible on account of the religious barrier, and this class in Quebec and Manitoba not even under English common law. Moreover, it is increasing rapidly, spreading into new quarters, and crowding back the English in the older. The lack of a system of compulsory secular education (any Catholic may have his school tax set aside for the benefit of schools managed by that church, and a third of their children are in Catholic parochial schools) prevents the English from disintegrating it by the most effective of solvents; and the rulers of France from whose hands the country was wrested might well enjoy a vindictive pleasure in contemplating the legacy of trouble they left to its conquerors.

The Spanish Republics. — From the southern border of the United States all the way to stormy Patagonia, the Spanish tongue, social system, and traditions hold unmingled sway on the Pacific side; and on the Atlantic, aside from the great Brazilian domain, the line is broken only by Balize and the Guianas. The Roman Catholic

religion is supreme in all; other forms are not suppressed, but endure heavy disabilities in some. There is no monarchy among all the fifteen states which stretch from the Gulf of Mexico to the Antarctic Ocean; all, though varying enormously in the actual distribution of political power and the actual conduct of government, are theoretically republics modelled on the United States. Republican institutions in most of them exist under the most unfavorable conditions possible, — the bulk of the population being as little fitted for self-government as any civilized race on earth, — and the better classes have sometimes to form a usurping aristocracy under democratic forms to save society from total wreck; and their political instability is a permanent factor in the speculations of all political thinkers. Yet the condition of the majority has immensely improved of late years; and it must be held a strong point in favor of republicanism that it can effect improvement among such elements, — that there is progress and not utter stagnation or anarchy. At present, however, the aspect of affairs is best where a firm and enlightened dictatorship as in Mexico, or a sagacious aristocracy as in Chili, has temporarily gotten the upper hand of the lawless multitude.



THE ORGAN MOUNTAINS, BRAZIL.

The West Indies, for obvious reasons, have not remained the monopoly of any one power; a swarm of fragments easy to conquer and re-conquer by maritime states, and often not worth the trouble of wresting from another, they have been divided up like the continent itself and even more variously retained, being shared by nearly every power of Europe which has a seaboard at all, — Spain, France, Great Britain, Holland, Denmark, and till lately Sweden, — besides two republics, each holding half of Hayti. But naturally, Spanish blood and social organization are greatly predominant in this their earliest western home, — Spain's possessions outweighing all the rest together, and the remainder containing a large Spanish infusion.

Brazil. — Three-sevenths of the South American continent is occupied by the Portuguese share of America. It was a constitutional monarchy of the English type with a Senate appointed for life by the emperor, and an elective House of Deputies; with the Roman Catholic the established church, but all religions permitted: and it had been fortunate in the long reign of a singularly enlightened and public-spirited

monarch, who had no ambition to reduce parliamentary institutions to a farce; he was, however, dethroned by a revolution in November, 1889, and together with his family was driven into exile, where he died two years later. Brazil was declared a republic of the federative type, under the title of the United States of Brazil, the old provinces being converted into States, each administered independently of the general government.

Population. — The New World contains at present not far from 122 million of people, of whom 89 million are in the northern and 33 million in the southern portion, if we take the Isthmus as the centre; if we begin the southern half at Mexico, as nature bids, the proportions are about 68½ million against 53½ million. Of this the great Protestant English democracy has about 63 million, — over half in a single vital unity growing much faster than all the rest combined; the Anglo-French state, where races and religions are struggling, but with the same element in the ascendant, 5 million; the West Indies something over 5 million, and continental Spanish America 33½ million, of which Mexico has 11 million; and Portuguese America 14½ million.

The Future. — From the above review, it is evident that the future of the New World is in the main identical with that of the United States. It has the best of the continent in land, climate, and commercial facilities; in its heritage of blood and of political and social institutions; in the opportunities for personal advancement, the orderly government and a share in its choice and direction, the developed society, which it offers to the less favored classes of the Eastern Continent. Nothing could show this more strikingly than the equal eagerness of the most widely sundered classes in the world, the middle ranks of Western Europe and the Chinese laborers, to merge themselves in this vast crucible. Canada receives some immigrants, the great Argentine Republic is attractive to the Latin races, and a few go elsewhere; but the overwhelming majority come to the United States, — allured, it must be confessed, largely by a past which is irrevocably past, by a boundless area of fresh land now practically exhausted, by a certainty of a comfortable living and a provision for old age which cannot now be assured, by an urgent demand for mere untrained manual labor, which shows ominous signs of giving place to something like the struggle for employment and existence which the Old World has known so long, and which cannot gain even temporary relief by the Old World's remedy. The eager welcome it has so long held out to all comers is fast changing to open hostility and a serious desire to check the flood, — which, however, will never be done till visible glut and hardship give intending immigrants pause. It has still enormous growth before it; it will be queen of the world in population: but those who look to see the streaming millions pour uninterruptedly into it in the future as in the past, who indulge themselves in gorgeous mathematical dreams of 200 million of inhabitants in 1950, and 400 million in 2000, and 1,000 million in a few centuries afterward, do so in ignorance or forgetfulness of fundamental laws of nature and of human character.



ESKIMOS.

NORTH AMERICA.

THE LAND OF THE ESKIMO..

The entire polar regions of America from Behring Strait to Baffin's Bay, and the whole of the territory of Greenland, nominally owned by three different powers, are in truth the domain of the one race which can wrest a living from them; one of vast antiquity, which has adapted itself through ages of evolution to its terrible environment. As the gratification of civilized wants, physical or intellectual, would be impossible, such wants cannot incite them, and the race as a race can never move forward in the stream of the world's progress; but it shows great suppleness of intellect in sustaining itself amid Arctic desolation, where no plant-food but a few wild berries can be had, and it is far enough above the lowest grade of savagery. About 40,000 of them exist. They feed on fish, on birds of sea and moor and the eggs of eider-ducks, on seals and walruses, on the reindeer which browse on the mosses hidden by the polar snows, and on such eatable flesh of the fur-bearing animals as can be found; when the flesh is frozen they eat it raw,—whence their Algonkin nickname of Eskimos ("raw-meat eaters"), their own native names being in various spots Innuít, Tchiglit, Karalit, Takshoot, Aghertit ("the people"). They will even eat the contents of reindeers' paunches; but the occasional eating of blubber and drinking

of oil, accredited to them as of choice, are only the dire necessities of hunger. Occasionally this hard fare is supplemented by ship-biscuit or canned food bought from whaling vessels by the exchange of furs.

They clothe themselves in bag-like garments of reindeer skin, supplemented by seal, bear, and other furs, — wearing two sets at once (the inner having the fur side inward, the outer with it outward), giving them the dumpy appearance which leads to the erroneous opinion that they are dwarfish, — neatly stitched with reindeer sinews. The extension of their relations with whaling ships and trappers, within the past generation, has wrought the same revolution in their native handicraft which a similar association did in that of the Indians. Their walrus-ivory needles and spears and knives are giving place to steel ones, their soapstone kettles to those of iron, iron hatchets give them a totally new implement, and bows and arrows are more slowly being displaced by guns and revolvers. Their keenest want, however, — that of wood, — even this source cannot supply to any material extent; it can only help them, supplemented by drift wood, to keep themselves in material for spear and knife handles, bows and arrows, etc.

Their kayaks and oomiaks — slender and wonderfully light canoes of whalebone ribs covered with stretched skins, each with a hole for the occupant, in which he fits so tightly that he can turn a somersault through the water with his boat and no drop enter it — are their carriages during the brief season of open water; but when the long winter sets in, the Eskimo's one tamed animal (for he has not harnessed the reindeer like the Lapp, but hunts and eats him), — his horse, his ass, his camel, his ox, — the wolfish Eskimo dog, the wonderful beast on which the Arctic explorer and trapper rely, rises into transcendent importance. Fed at oftenest on alternate days, and sometimes for weeks together but once a week, — their choicest food being walrus hide of leathery toughness and an inch thick, and often having to content themselves with *capelins* (dried fish), — harnessed to sledges in teams of a dozen or more, and frequently stopping to fight like wolves with any other team they chance to meet till beaten apart by the drivers' rawhide whips, they make journeys of hundreds of miles over crusted or sodden snows, where even the reindeer could not keep his footing; working in this way for months together, totally unsheltered in the Arctic winter, or at best covered only by the half-open "storm igloo."

The Eskimos in summer live in sealskin tents. In winter they make the destroying element yield them shelter in a singularly ingenious way, building a dome-shaped *igloo* (hut) of nicely cut blocks of snow with a keystone, sealed by pouring water over it to freeze, or by heaping loose snow upon it to the depth of two or three feet, first calking the joints by ramming snow into them with a knife. Thin sheets of ice are set in the sides for windows, but soon become blackened beyond use by the soot from burning oil. The door is a hole at the bottom just large enough to enter on hands and knees, blocked by a cake of ice; and outside it is a smaller "storm" igloo, an anteroom usually crowded with hungry dogs. In the larger igloo, of about the area of a hay-rick, and just high enough to stand upright in the middle, live a whole family; a raised bench of packed snow along one side, covered with reindeer skins, is the common sleeping-place, and the morals of the race correspond to this absence of privacy. Fires are of course impossible in this snow house even if fuel were obtainable, as the temperature must not go above freezing; even the fragrant soapstone dish of walrus oil with floating moss for wicking, — the only light and the only fire, — sometimes has to be checked for melting the roof too fast, and the dripping spots are



A FJORD IN WINTER.

soldered up with a cake of snow. What with this sooty smoke and the breath of the occupants, the air is close inside; but the porous snow admits enough air for passable ventilation, and a very high wind will sometimes force the occupants to muffle up in furs to escape freezing.

The Eskimos are remarkable among aboriginal races for the pictorial faculty strongly developed, and their sense of the ludicrous and power of mimicry are also striking. In body they are of the Siberian rather than the American type, with large heads and bellies and spindling legs; on the other hand, their skull-form is a heavier argument in favor of an American origin. The weight of probability is also against the supposition that they once occupied New England and were driven out by the Algonkians; they seem to have advanced and receded with the ice-sheets, and clung to icy rivers and seas, — primarily fishermen.

GREENLAND.

This huge polar island,¹ the largest in the world if Australia is ranked as a continent, is here classed under "America" because such is the usage; but in fact it is a true though small continent in itself, and in one vital respect unique in the world. It belongs to the American continental group by having the type of a spindle, vertex to the south and broadest some distance above the middle; it is both American and European in its raggedness of coast, but more like Norway in its long narrow fiords, piercing miles in among the cliffs; it is substantially European in its plant and animal life, and as the sea is much shallower toward the east than the west, Iceland and the F  ro  s and Shetlands and Orkneys probably united it once to the eastern mainland. But instead of being formed of parallel ridges with the greatest height on the west, as in America and England and Scandinavia, it is turtle-shaped, with a rounded table-land in the centre sloping down on all sides to the sea, — to which is due its being covered by one enormous sheet of ice except in the south, instead of being a possible habitation for agriculturists. From the melting of this ice cap in the short summer flow countless rills which gather into rivers, cutting deep channels in it like American ca  ons, chiselled like hewn aqueducts and gorgeous with prismatic colors; and the streams disappear in cataracts into fathomless abysses in the ice, which is rent in every direction with crevasses, dotted like a colander with millions of little circular cavities two or three feet deep, each holding a pool of clear water with thick mud at the bottom, and often covered with a red vegetation nourished by the same wind-blown dust from other parts of the world ("kryokonite") which forms these cavities by drawing solar heat and melting the ice. Heavy snows fall and replenish the latter, which is hundreds of feet thick above the land; and it presses downward and off the shores into the sea, — its melting base grinding the earth into mud which pours with the glacier water in muddy streams into the fiords, — ploughing along the ocean bottom till vast islands of it are broken off and float away, towering from fifty to five

¹ The "Polaris" expedition, by homologizing the tides on the east and west, finally settled the question of its insularity.

hundred feet above the water, but with six times as great a portion of their height beneath, their bases sometimes more than half a mile below the surface. These mighty engines of destruction — picturesquely varied in shape, from obelisks to broad square towers — linger about the mouths of the bays, causing whirls in which the Eskimo canoes are sunk; then they float southward with the current into the Atlantic, almost invisible ghostly islets, against which many a ship has hurled itself in the night and sunk with all its human load; and finally melt away in the warmer southern waters.

Greenland springs from about the North Pole, like all the continental masses, but far closer, probably beginning about 83° N., or 484 miles from the Pole, and extends southward to $59^{\circ} 49'$ at Cape Farewell, or about 1600 miles, with an extreme breadth of 690, and an area estimated at 512,000 square miles, or nearly eight times that of New England, and towards double that of the original thirteen States of the Union, as their boundaries now stand. A sea from two to three miles deep and 200 to 400 miles wide — known as Baffin's Bay and Davis Strait — lies between it and polar America; and a thousand miles of the Arctic Ocean stretch from thence to Norway, whence by way of Iceland its discoverers came. The discovery in 983 was accidental, and led to the equally accidental discovery of the New World. But it seems certain that at that time the climate of Greenland cannot have been at all so rigid as now. Its name, given it by the Norsemen, might be a reminiscence of their first sight of its coasts on a summer day: but they settled it as a promising new home, and occupied three hundred farms there, where now the only cultivation is in small artificial gardens and hot-beds; the climate of Iceland has grown so much colder and rainier and cloudier during a few centuries that it too is now nearly uninhabitable; an increase of moisture in Greenland would create more ice and snow than rain; and an unmelting ice-pack for many years cut off communication with the eastern shore, though it was previously open. All these things convince us that southern Greenland eight hundred or six hundred years ago was a habitable land; and from still remaining trunks, stumps, and frozen foliage, it was probably forest-clad. But Iceland lost its independence and therewith its energy, and ceased to uphold its colony; the summers grew colder, and the autumns became changeless seasons of sleet and snow, and the land ceased to bring its crops to maturity: and the colonists (we must suppose), forced to live as the Eskimo did, took Eskimo wives and sunk into the Eskimo mass, among whom in Greenland the Norse blood is still perceptible.

The very existence of the country had been long forgotten, when in 1587 John Davis, in search of the North-west Passage, entered the strait which bears his name and discovered it afresh. In 1721, Moravian missionaries from Denmark, with a government escort, settled there to convert the natives, which they did in considerable numbers; and the descendants, full-blooded or half-breed, of these Christianized Eskimos, with a very few whites, who are missionaries, school-teachers, government officers, or merchants form a little colonial dependency of Denmark, with less than 11,000¹ souls, divided into two inspectorates separated by the parallel of $67^{\circ} 40'$ at the Longfiord, — the southern Julianshaab, the northern Christianshaab, — each containing several districts, and comprising together 176 inhabited settlements. The government is truly and helpfully paternal to these simple and improvident wards: it buys the products of their industry, — oil of seals, walrus, and whales, skins of reindeer,

¹ At the last census, 9781.

bear, fox, and other animals, feathers and eggs of the eider-duck, etc.,—sells them needed stores at the lowest market cost, keeps intoxicating liquors from them, and appoints magistrates to settle their disputes and report their needs, with delegates from the settlements to assist in the deliberations.

A little corn and potatoes and a few kitchen vegetables and berries are raised in the few weeks of chilly summer, in garden-beds of mould from old Eskimo houses, and a few berries grow wild; but living by agriculture is nowhere possible. The highest recorded heat was 68° F., at Upernavik 59°. The land is bare even in the south for not over four months at the longest, July is the only month wholly free from snow, and for most of the year the land is a snow-drift and ice-waste, covered and drenched and crusted with snow and rain and sleet, with here and there a bare black peak protruding (rising to 11,000 feet on the eastern coast, but usually not above 5000, the central table-land being about 3000 feet above the sea); and during this winter, reigns in the north the Arctic night of six months' length, with rarely an aurora to relieve it.

The chief note of Greenland is as the great highway for polar exploration: Upernavik (72° 40' N.) is, except the little hamlet of Tasiusak a few miles farther north, the northernmost settlement on the continent, and almost the highest on the globe, and here is the last land base which exploring parties can find. Even the Greenland ice-sheet is a surer road than the fearful Arctic Ocean,—tossed into the wildest billows by furious storms, thick with blinding mist and snow, and full of icebergs clashing against each other like the Symplegades,—and by this road men have penetrated nearest to the Pole.

THE GREAT LAKES.

The vast water-system of central North America is of such a character and so related to political divisions that it is best treated independently. It consists of a trefoil of fresh-water seas emptying into a fourth, whose waters are received by a fifth, the whole discharging through a great river which soon becomes a true estuary, and expands into a gulf of the Atlantic 2200 miles from the head of the farthest streamlet of the system to the west. The lakes steadily diminish in size from the beginning. The last two of them and the river form a continuous current with a north-east course, closely parallel to the Atlantic coast and the Alleghany range. The system in general is the boundary between Canada and the United States, though Lake Michigan is wholly within the latter, and most of the St. Lawrence is within the former.

The most striking peculiarity of the lakes is that they have very slight drainage basins, and streams gather almost at their very shores and flow to feed the Mississippi or the Saskatchewan. They are not, like the vast majority of lakes, wide low spots in a drainage channel which narrows above and below; they are huge hollows scooped in the summit of a table-land, and the ridges of their immediate basins are watersheds which turn the rains away from them. The streams which replenish them are therefore mostly short, fierce torrents full of rapids. They are all shrinking to some extent, like most other inland waters. In fury of storms, only the Arctic Ocean can compare with them. Winds as wild as those of the great main rage over their waters,

the relative small extent and shallowness of which cause them to rise in high quick billows, harder to battle against than even those of the great ocean; every storm lines their coast with wrecks, and some of the most awful of disasters to human life have been upon these inland seas.

Lake Superior (Indian "Kitchigami") is the beginning of this system, and the most magnificent of all: about 32,000 square miles in area (half that of New England), with a length of 380 miles and a width in the centre of 160 (having the shape of a strung



CATARACT OF THE CHAUDIÈRE.

bow), it is the largest body of fresh water on the globe; and in its lines of bold crags and its forms of plant and fish existence it is more than seemingly oceanic. It has a depth in spots of some 1200 feet, and an average of 900; its height above sea-level is 641. Its waters are very cold; they are of crystal clearness and purity, owing to the primordial rocks in which its bed and the channels of its slender tributaries are formed. Its southern shore is Minnesota and the "northern peninsula" of Michigan, the greatest copper district of North America; its northern is the most worthless section of Canada. Its outlet is by St. Mary's Strait or River, 63 miles long; a mile

from its beginning it breaks into rapids three-fourths of a mile long, with a fall of 22 feet, and thenceforth is a broad, deep, quiet channel.

To the south, and at right angles to Superior, lies Lake Michigan, the second in size of the Great Lakes; 340 miles long, from 50 to 88 broad, and 25,600 square miles in extent; with a depth of 990 feet, and a height of 600 above the level of the ocean. Its shores are in strong contrast to those of Superior, being low, often sandy, and sometimes marshy. On the south and west, in Illinois and Wisconsin, it has built up great cities at the swampy mouths of petty rivers; on the east is southern Michigan, with few and poor harbors. It is elliptical in form, lying north and south, with the northern end bent to the east to discharge its waters into Lake Huron, only four feet lower, through the short, wide, island-guarded Strait of Mackinaw.

Lake Huron, in wonderful contrast to the general regularity of the other lakes, is so wildly ragged and uncertain in its outline that no accurate measurement has been made of its area. It is known to be third in size of the Lakes, and estimates vary from 21,000 to 23,700 square miles. Its main body is crescent-shaped, and it lies nearly parallel to Lake Michigan, forming the third leaf of the clover. To the north and east, the great peninsula which divides Superior from Michigan prolongs itself from the mouth of St. Mary's River in a line of considerable islands (the largest, the "Grand Manitoulin," or island of the Great Spirit, being 90 miles by 30, and forest-clad), joining another peninsula running north from southern Ontario, and cutting off from the lake a great section known as the "North Channel" or Manitou Bay to the end of Grand Manitoulin and the Georgian Bay the rest of its course. This part lies wholly in Canada. The Georgian Bay is 170 miles long by 70 broad, one-fourth the whole lake in size, and has good harbors; but it is shallow, gusty, and dangerous. Lake Huron is said to contain over 3000 islands of some size. Its length is about 280 miles, and its breadth, excluding Georgian Bay, is 105. It is the deepest of all the lakes; its mean depth is 1000 feet, and there are spots more than 1800 feet deep. Its level is 596 feet above that of the Atlantic, 45 feet below Superior, and 4 feet below Michigan. Its water is singularly pure, clear, and sweet.

This cluster of lakes discharges its waters into Lake Erie, the beginning of the north-eastward-running stream, by a channel 98 miles long, with three different names, dividing Canada from the United States. The portion leading from Lake Huron is called St. Clair (properly Sainte-Claire or St. Clara) River, and is a noble and beautiful stream, half a mile wide and fifty feet in depth. After a course of 40 miles it widens into a huge shallow pool, — 20 feet deep, 30 miles long, 360 miles in area — called Lake St. Clair, debouching into it by six mouths. This "lake" — merely a bad spot in the river, with swampy shores, and navigable for large ships only through artificial channels — narrows again to the Detroit River (originally the *détroit* or strait), from half a mile to a mile wide, which 25 miles from its beginning loses itself in Lake Erie, pouring into it an estimated volume of 200,000 cubic feet per second.

Erie is a curiously shallow cup, filling up with mud at its western end, where it is not over 30 feet deep; it is 60 in the centre, and reaches near the eastern end a maximum of 270 feet. As a highway of commerce it is of very great importance, bordering Michigan, Ohio, Pennsylvania, and New York on one side, and Ontario on the other; but its extreme shallowness makes it, from the violence of its waves, the most dangerous of all the Great Lakes, and also causes it to freeze up along the shores. It is 240 miles long, with an extreme breadth of 58 miles and a mean of 40, and an area of about 9000. It is 565 feet above sea-level, the fall from Superior having been only

76 feet; but the connection with Ontario is by a cataract known all over the world, the culmination of a series of rapids with 52 feet of fall, and the level of the latter lake is 333 feet below that of Erie. The Niagara River, carrying down from 300,000 to 400,000 cubic feet of water per second, comes after 16 miles to a precipitous wall of limestone over 150 feet high, with an island half a mile long and forty feet high on its verge; dividing around Goat Island with a width of nearly a mile, the fall on the American side is the deeper, 167 feet, but the "Horseshoe Fall" of 158 feet, on the Canadian side, has the greater volume of water, — 1870 feet wide and 35 feet thick, against 1080 feet wide and 20 feet on the other, — and is the Niagara of the world.



THE ST. LAWRENCE AND THE THOUSAND ISLES.

The river passes from this thunderous gorge through perpendicular rock walls only two to four hundred feet apart, spanned now by three great bridges, boils into whirlpools fast losing their terrors, and at last flows peacefully for the remainder of its course of 35 miles till it ends in Ontario.

This last of the Laurentian basins is the smallest in superficial area, — estimated from 6500 to 7650 square miles, with a length of 190, a maximum breadth of 55, and a medium of 40; but its volume of water is vastly greater than that of Erie, for its depth is great and very even, — averaging 500 feet, and reaching above 700 in spots. It is 232 feet above ocean level. It is the safest of all the Lakes to navigate, and from its depth does not freeze so badly as Erie; it is connected with the latter by the Welland Canal to avoid the Niagara.

From Ontario — one cannot say just where, as its eastern end gradually narrows through a cluster of 1500 lovely islets, the most numerous collection of river-islands in the world, in an expanse called the Lake of the Thousand Isles — flows a clear green river, which receives important accessions from a drainage basin of con-

siderable breadth, practically coincident with the Province of Quebec, and including also Lake Champlain in the United States; until we reach Montreal, it is on a great scale what the general Laurentian rivulets are on a small one, — a string of alternate pools and rapids, the former called "Lake" this or that. The rapids are so regular in descent that passenger steamers can navigate them; for freight, seven canals have been dug around them, 41 miles long. A vessel of 500 tons can pass, without breaking bulk, from Duluth, at the western end of Lake Superior, or Chicago, at the southern end of Lake Michigan, to every part of the world. After receiving the noble Saguenay from the north, the river widens to an estuary 16 miles broad, increasing rapidly to near 100, where it divides around the large and perfectly barren island of Anticosti, — fringed with a few fishing hamlets, but harborless, foggy, full of vast swamps and stunted woods of birch and pine, — and merges in the Gulf of St. Lawrence, marked off from the ocean by Nova Scotia, Cape Breton, and Newfoundland. The drainage basin of the whole system is variously given as 335,000, "over half a million," 532,000 square miles; probably the second is safe. Its mean discharge of water is reckoned at 500,000 cubic feet per second.

DOMINION OF CANADA.

Extent and Composition. — The name Canada, when England took from France her American possessions, meant a strip of country north of the Great Lakes, and fringing them and the St. Lawrence; substantially the present Provinces of Quebec and Ontario, the Upper and Lower Canada or Canada East and Canada West of our childhood. It now implies, under its official title "Dominion of Canada," a territorially huge confederation, whose occupancy of land — nearly $3\frac{1}{2}$ million square miles — is almost half the northern continent and close upon the area of the United States and Alaska together; it has the entire continent north of the former except the latter and Newfoundland. It stretches from the Atlantic to the Pacific, — about 3000 miles of longitude, of course much farther on land, and with a southern boundary above the United States of 3540 miles; its ocean frontage is unfortunate in situation, — confined by a cold sea and bleak shores practically to Nova Scotia and New Brunswick on the east, and British Columbia, facing uncommercial Asia, but it is rich in good harbors on both sides, the St. Lawrence is practically the ocean, and the Canadian shipping excels in volume that of every nation except Great Britain, France, and the United States. Of its enormous territory, 2 million square miles are Arctic moors; it has nearly all the absolutely worthless part of the continent, and its great central gulf of Hudson's Bay is substantially unnavigable, icebergs endangering shipping and sometimes blockading it even in August, and the whole expanse being frozen eight months of every year. It is 900 miles long and 600 broad, about 500,000 square miles in extent, but is only a resort for whalers and a seat of the Hudson's Bay Company's warehouses.

Physically, its regions are six. British Columbia is the first, the heavily watered and timbered Pacific slope and coast of the Rockies. East of this is the northern

part of the great central plain of America, filled with a net-work of lakes, and drained to the Arctic by the Peace and Mackenzie system and to Hudson's Bay through Lakes Winnipeg and Manitoba by the immense Saskatchewan system. This is the great wheat-belt, rising in the centre and west to a rather high latitude of habitability, owing to a dryness of air which makes the severe winters not quite unendurable: it shades by indefinite gradations to the Arctic wastes. Eastward, along Hudson's Bay and the Great Lakes, is a stony table-land of utter sterility despite its situation between great waters, severe and permanently uninhabitable. Southern Ontario and Quebec are a well timbered region with much good land, the former exceptionally favored, and the St. Lawrence forming virtually an ocean frontage for the latter. Fifth are the maritime provinces along the Atlantic; and last comes the unhappy peninsula of Labrador.

The Laurentian chain, insignificant as it is in height, is of great physical and geologic importance. It is very long, — 3500 miles, — running from the Arctic around Hudson's Bay and then parallel to the St. Lawrence system and the Alleghanies to the Atlantic in Labrador. It is first the water-shed of the Mackenzie system on the west and the Back and Hudson's Bay rivers on the east; the Churchill and Saskatchewan pierce it, but it soon becomes the water-shed of the St. Lawrence; the great rivers of Ontario and Quebec descend from it on the south, and streams flow to Hudson's Bay from its northern slopes. Its substance is of extremely ancient primordial rock, and its pool and lakes, its dark streams, and its countless cataracts, are clear as crystal and of incomparable beauty. Its slopes in general are thickly clothed with pines and firs.

Originally, the Dominion was formed of Ontario and Quebec, and the coast provinces of Nova Scotia and New Brunswick (Acadia), in 1867, by their voluntary choice; though the moving cause was the equality of political power, in the old union of Upper and Lower Canada, between two increasingly unequal sections. Succeeding in 1870 to the territorial rights of the Hudson's Bay Company in "Rupert's Land," around the Canadian Great Lakes of Winnipeg and Manitoba, it encountered and suppressed an insurrection in taking possession of it; and in the same year formed from it the province of Manitoba and the North-west Territories, and admitted the former to its union. In 1871, British Columbia, with Vancouver Island, was admitted; and in 1873 Prince Edward Island joined the Dominion, leaving Newfoundland the only English possession north of the United States outside the great federation.

These provinces are copies in little of the Dominion government. The governor-general appoints for each a viceroy called a lieutenant-general, and a life council (executive alone, or two councils, one executive and one legislative); and a legislative assembly is elected by the people. The governor-general of the Dominion is in like manner appointed by the Crown, but he himself appoints a life Senate (a compromise between a hereditary House of Peers and an elective body like the United States Senate); and a popular assembly is also elected.

As yet the Dominion of Canada, from the nature of its physical divisions no less than of its race elements, is not a vital unity, but a collection of fragments with one dominant central body. Old Canada, meaning for commercial purposes western Quebec and southern Ontario, has virtual unity, despite race isolation and other elements of discord; but the maritime Provinces are jealous and doubtful of the value to themselves of paying for vast transportation schemes in the central Provinces, the

Red River and Saskatchewan district is separated from old Canada by many hundred miles of eternal emptiness, and British Columbia is isolated by her mountains.

Elements of Prosperity.—Despite the terrible drawbacks of climate and great sterile regions, Canada has factors of a prosperous and powerful future. Her remarkable commerce—fourth in the world, with a population not above fifteenth among civilized states and divisions—has been referred to. Her varied agricultural possibilities alone secure a solid basis for the future. Her mineral wealth is great: coal, iron, gold, silver, copper, marble, phosphate rock, salt and gypsum, petroleum and oil shales, are only a portion of the treasures to be exploited. The lumber, fur, and fishing interests are each of vast magnitude; and the splendid water-power created by the headlong torrents with which it abounds assure an enormous manufacturing development. The greatest single unifying weight ever thrown into the scale has been the Canadian Pacific Railroad, perhaps the most gigantic public work ever undertaken by a state of such small resources (for the latter's gifts and guarantees warrant calling it a government work). It has already made Winnipeg an important city, and will probably make it a great emporium, the leader of the Canadian West.

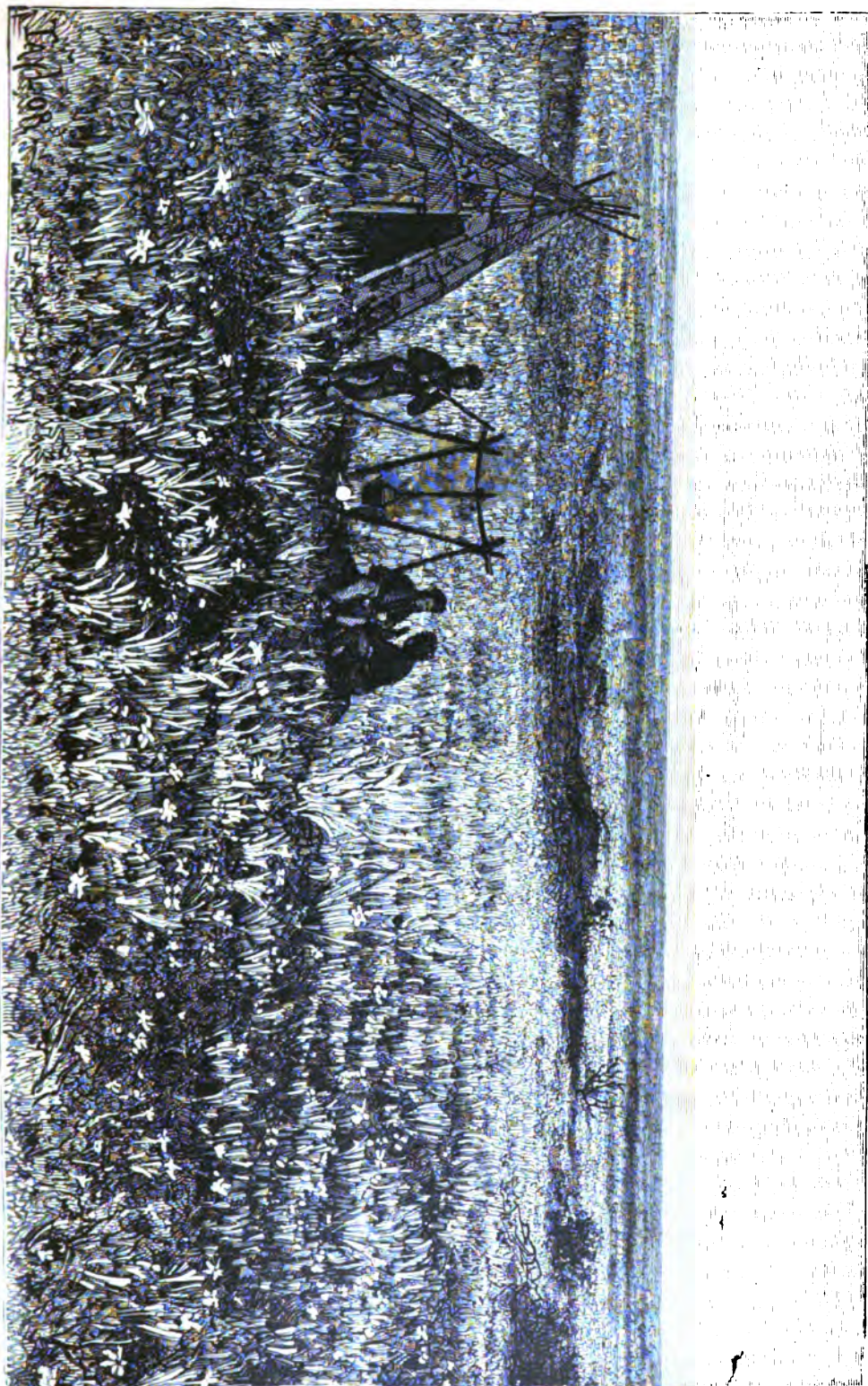
Population.—The latest census of the Dominion, taken in 1891, gave it 4,829,411 people; the census of 1871 had given but 3,686,639. If only the same ratio of increase had obtained in the past four years as in the previous decade, the population would now be some 5,100,000; it had at first certainly increased in greater ratio: the internal increase had been stimulated by prosperity, immigration had been increased and emigration diminished by the same cause, and the remarkable growth of the Red River country was largely a new creation, re-enforced even from the United States. We may put the population in round numbers at 5 million, of which nearly three-fourths are in old Canada—Quebec and Ontario. Of these, the French element constituted three-tenths in 1881; if they constitute three-tenths now, it would be equivalent to a gain of nearly 12 per cent in a decade,—and it is probable they are thus numerous. Of the other elements, the Irish were most numerous at the 1881 census, with the English and Scotch successively not far below; the Germans were also numerous. The Indians of full blood, mostly isolated, are not properly an “element.”¹

CANADA.

Quebec and Ontario.—The boundaries of these Provinces have been immensely widened since the census of 1881, and an exact estimate of their area is not possible. At that time it was reckoned at 301,135 square miles, 193,355 in Quebec and 107,780 in Ontario; at present it may be set down as not far from 600,000, 250,000 in Ontario and 350,000 in Quebec.

The Province of Ontario is limited by James Bay (of Hudson's Bay), the Albany River, and the Lake of the Woods; its southern edge rests on the Great Lakes and the St. Lawrence; and on the east it is divided from Quebec by the Ottawa River and a line running to Hudson's Bay. Its western extension has carried it beyond the

¹ The 1881 figures are: French, 1,299,161; Irish, 957,403; English, 882,894; Scotch, 699,863; Germans, 252,848; Indians, 108,547.

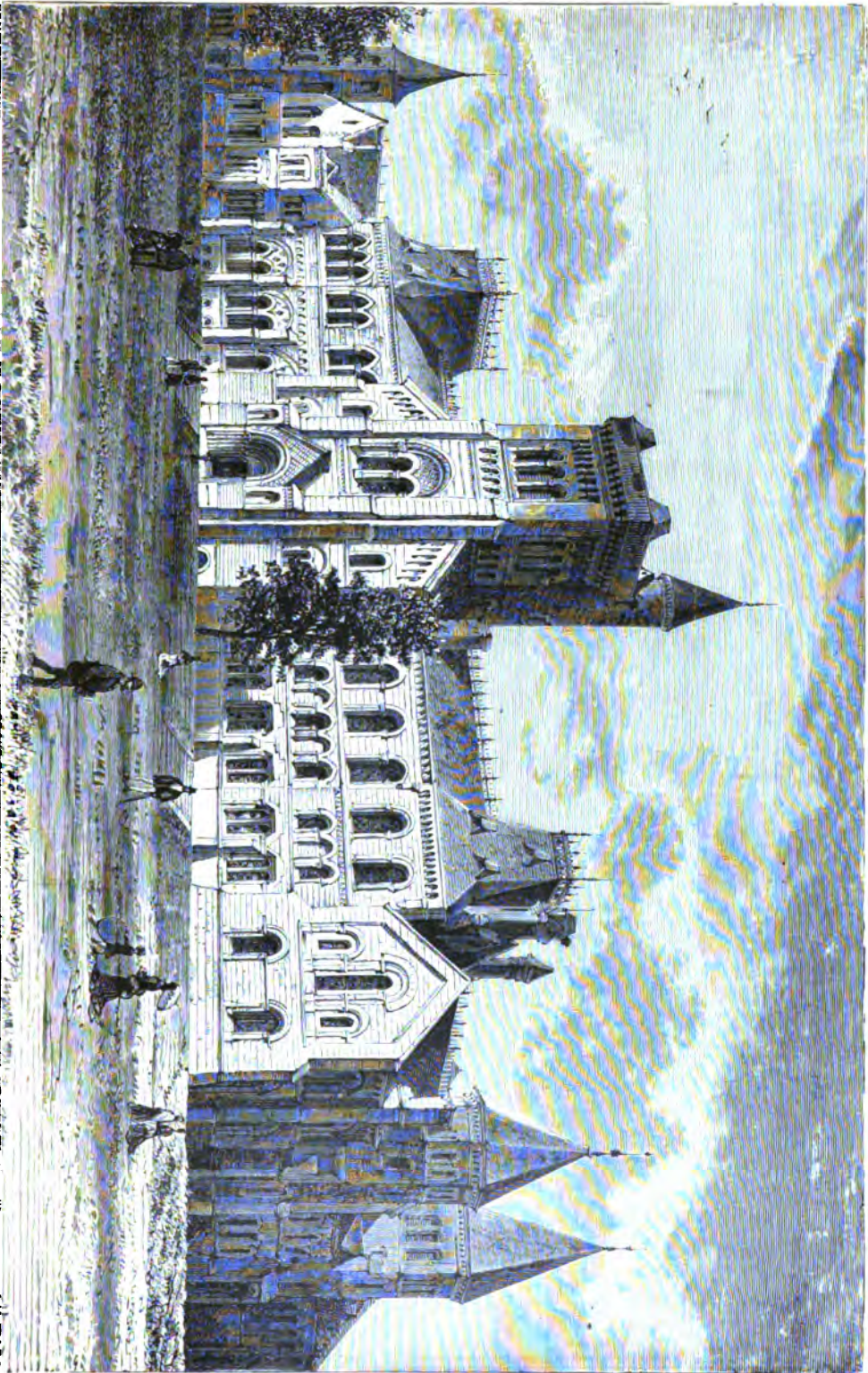


sterile belt and into the Saskatchewan basin and the wheat-fields. The Albany is a stream of more importance than its size or its length—320 miles—would indicate: it is the funnel for the waters of a number of widely Sundered streams and lakes, which by short portages unite the Great Lakes with the Saskatchewan system. The Lake of the Woods, divided between Canada and the United States, is an octopus of peninsulas and fiords, and crowded with a labyrinth of wooded islands which cannot be threaded except by the practised Indian guides of the neighborhood,—about 100 miles long, but more than 500 in circuit, and 977 feet above the level of the sea; it is filled from Rainy Lake River, a collection of lochs and rapids rising almost at the shores of Lake Superior, and sends the Winnipeg River to feed the great lake of the same name. Nipigon Lake, a twin-brother of the former in shape and number of



THE PARLIAMENT BUILDINGS, OTTAWA.

islets, of wonderful clearness in its granite basin, is 70 miles long and perhaps as great in circuit as the other, and sends its waters to Lake Superior by a stream 50 miles long, of the nature characteristic of these sharp rock-slopes. Indeed, the considerable Ontarian waters are practically all of this character of lake and stream. The next large water-course to which we come on the east is the French River, only 55 miles long and full of rapids, but discharging into Georgian Bay the waters of Lake Nipissing, 50 miles long by 35 miles wide, also island-dotted, and connecting by a short portage with the Ottawa; and the Severn in a course of 20 miles carries to the same gulf the contents of Simcoe Lake, 30 by 18 miles, memorable for having been the seat of the great Huron Indian tribe, on which the Jesuits attempted to base a Christian Indian confederacy, till the Iroquois annihilated the tribe and burned the missionaries. The Thames, flowing into Lake St. Clair, has developed some important towns; and there are other moderate streams. Far greater than any of these streams, however, is the splendid Ottawa, 800 miles long, but of the true Canadian



THE UNIVERSITY OF TORONTO.

character on a grand scale, here a "lake" and there a cataract, that of the Chaudière at Ottawa city being one of singular beauty and impressive grandeur. This noble river — commercially notable as a highway for lumber rafts from the forests on its banks, and its navigability extended and connected by dams and locks — flows into the St. Lawrence 25 miles above Montreal. The northern basin of the St. Lawrence and Lake Ontario is an interminable maze of small lakes like northern Maine.

Ottawa, the capital of the Dominion, lies on the right or Ontarian bank of the river of its name, with a site of wonderfully picturesque beauty just where the river flings itself over the precipice, spanned by a suspension bridge whose other end is in Hull (Quebec); it is divided by the Rideau, while just below on the Hull side enters the Gatineau of Quebec. Hull is an old French settlement, and most of its 11,000 people are French; Ottawa is a mixed but dominantly English city, with 44,000 souls and the seat of large manufacturing interests, especially of wooden-ware. The only other towns of any size in the eastern part of the Province are Kingston (19,300), on the site of old Fort Frontenac, just where the lake enters the St. Lawrence by the Bay of Quinte, through a crowded archipelago and many peninsulas; Belleville (10,000), on an arm of the same bay farther west; and Brockville (9000), a little way down the river. Peterborough (10,000), on the Otonabee, heads the business interests of the central portion. But the overwhelming mass of commercial development is in the south-western peninsula between the three Great Lakes, where these, several navigable rivers, and railroads have dotted the land with thriving centres of trade. Here, near the western end of Lake Ontario, is Toronto, the capital and business head of the Province and the second city of the Dominion, founded more than 250 years later than Montreal, but promising to closely rival it; with a population estimated at 181,000, and with prosperity based on extensive manufacturing as well as commerce.

At the western apex of the lake is Hamilton, the Birmingham of Canada, with 35,961 in 1881 and 49,000 now. These two represent the Lake Ontario business; St. Catharines (9000) is built up by the Welland Canal, close to Ontario but owing something to Erie. Brantford (13,000) and St. Thomas (10,500) are on navigable streams flowing to Erie; the Thames flowing to St. Clair is appropriately a mother to London (32,000), the third city of the Province, about midway of the neck between Huron and Erie, to Woodstock (8600) at its head of navigation, and to Chatham (9000) near its mouth; Windsor (10,300) is suburban to Detroit and wistfully eyed by smugglers, and Sarnia with American Port Huron are at the beginning of the St. Clair River; Guelph (10,500) and Stratford (9500) are railroad junctions on the line from Toronto to Sarnia. Lake Huron proper boasts no Canadian ports of much promise, though Goderich in the centre (4000), at the mouth of the Maitland River, may develop; but the fine harbors of Owen Sound (7500) and Collingwood (4900) in Georgian Bay, probably have a future, — the former being the starting-point of a line of steamers for Port Arthur (2700) on Thunder Bay of Lake Superior, where a Canadian Pacific branch runs to Winnipeg.

The population of the Province in 1891 was 2,112,989; in 1881 1,030,000 were French. The general spread of the French population, and the special effort at colonizing those families on the upper lands, has doubtless increased this percentage greatly.

The Province of Quebec extends on the northern side of the St. Lawrence, which divides it in the centre, to Hudson's Bay, and the Strait of Belle Isle, including part of Labrador; on the southern side it bounds upon New York and the northern New

England States, and includes the curving peninsula of Gaspé between the St. Lawrence and the Bay of Chaleurs. It has a slope from the Laurentides of some length, and its northern part consists almost wholly of the parallel valleys of a great number of streams a few miles apart, fed from chains of lakes in the hills; the chief of these in length is the St. Maurice, 400 miles long, with a basin of 19,000 square miles, which — after falling in a cataract as high as Niagara and emerging from it through a gorge but 92 feet wide — enters the St. Lawrence at Three Rivers, just beyond the



THE DOCKS, MONTREAL.

expansion called Lake St. Peter; but the most remarkable is the world-famed Saguenay. This stream of 100 miles in length, the outlet of Lake St. John, is a rock channel mostly without shores, a real estuary over 3000 feet deep at its mouth, from 100 to 1000 at other points, navigable for the largest vessels during the lower half of its course, with its waters as deep at the banks as in the centre, and those banks sheer crags rising from 500 to 1800 feet into the air with the water hundreds of feet deep at their bases, and from half a mile to two miles apart. On the south, the large United States Lake Champlain discharges into the St. Lawrence through the Riche-

lieu River, the pretty Lake Memphremagog, shared by both countries, through St. Francis River, and Lake Megantic through the Chaudière.

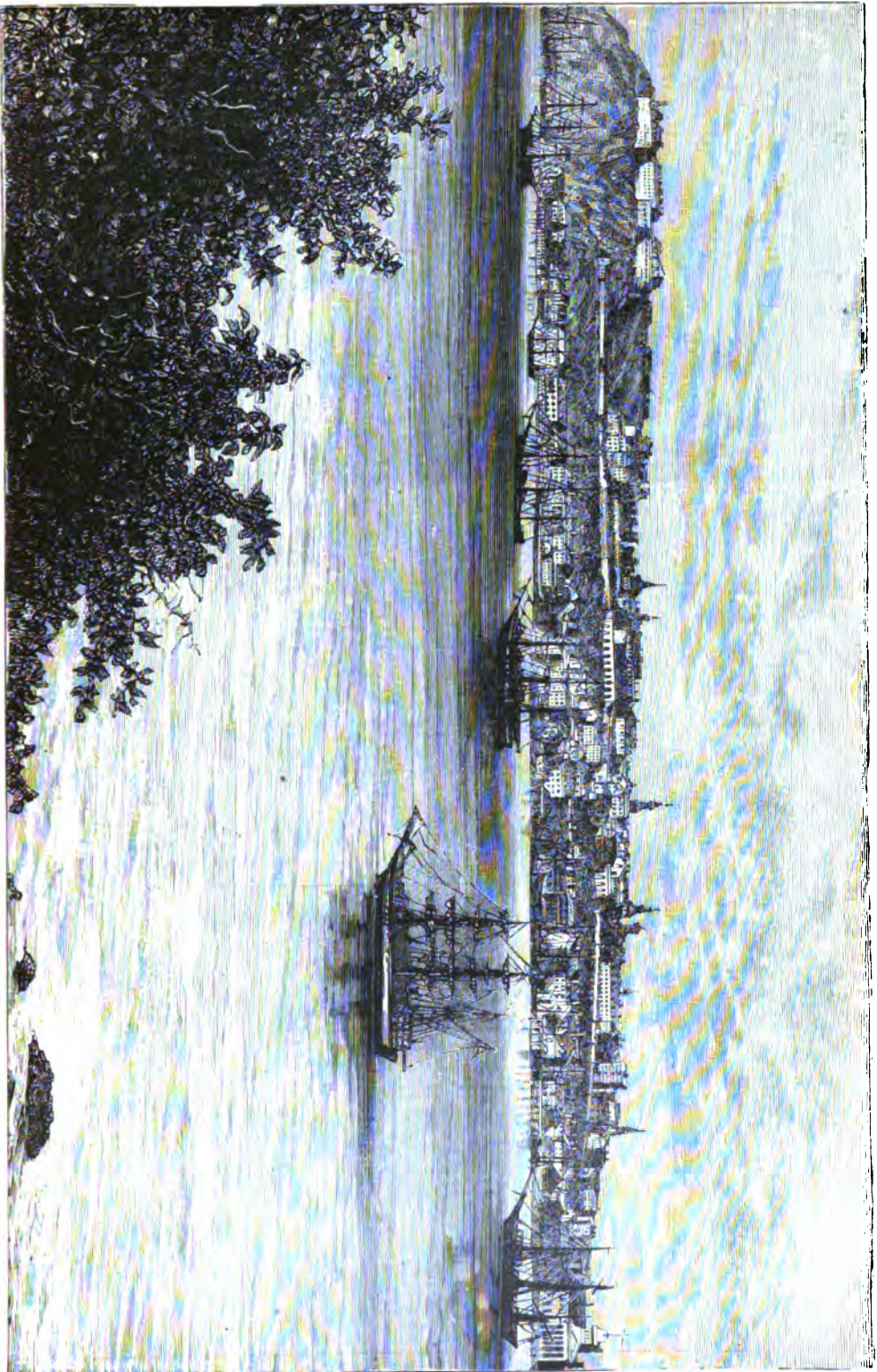
The business development of the Province has been nearly all on the St. Lawrence or along the lines of railroad connecting Montreal with the United States. The leading city of the Dominion is Montreal, the oldest settlement in Canada, founded in 1542 on the site of the Indian village of Hochelaga, on an island in the St. Lawrence 32 miles by 10 opposite the mouth of the Ottawa, occupying two miles of plain at the foot of a steep hill; the head of ocean navigation, the beginning of that on the Great Lakes and their connections. It reaches the world across the St. Lawrence by the famous Victoria Bridge, 9184 feet long. The city proper grew in thirty years (1851-



THE VICTORIA BRIDGE.

1881) from 37,715 to 140,747, increased by suburban villages to 173,000; it is officially credited with over 216,500 now.

The historic city of Quebec is the capital of the Province, the second settlement in Canada, and the famous stronghold whose fall gave the country to the English. It lies on a steep bluff on the north bank of the St. Lawrence and between it and the St. Charles, just before the great river widens around Isle Royale to an estuary. The old town lay on the summit of Cape Diamond, the strongest natural fortress in America, 325 feet above the water; it has crept down by winding streets, and a new city has grown out upon the breast of the water by piers and rock foundations. The city in 1881 had 62,446 inhabitants, against 59,699 in 1871; being rather a social capital and a museum for tourists than a business mart, its growth is slight, so that it even does not exceed 63,100 at present, with about 8000 in Point Levi across the river. Not far from 50,000 French; it is the great metropolis of French Canada. The only other places of consideration in the Province are Three Rivers (pop. 8500), at the



A GENERAL VIEW OF QUEBEC.

confluence of the St. Maurice and St. Lawrence, a lumber port; and Sherbrooke on the St. Francis, a manufacturing town with 10,000 inhabitants.

The population of the Province of Quebec in 1891 was 1,488,586; in 1881 about 1,075,000 were French. Immigrants do not settle greatly in the Province, except in the western sections, but on the other hand the internal increase is very large; and it is likely to remain for very many generations under the absolute domination of French social and political ideas.

Labrador.—Geographically, this is the name of a peninsula lying between Hudson's Bay and Strait, the St. Lawrence, and the Atlantic, blasted into everlasting desolation by the polar currents circling around it; a land of cold mists and of Laurentian rocks, hilly enough in the centre to form definite water-sheds to all those bodies of water, filled with steep rapids, cascades, and dark rock pools, and frozen into white silence many months of every year, with frequent and bitter storms of half-frozen rain. Its only permanent civilized inhabitants are a few thousands—6300 in 1881—of French fishermen on the river and ocean coasts, who vainly try to wring enough subsistence from its cold and scanty soil to eke out their catches of fish; the government saves them from extermination in more than usually severe winters by rations of flour and pork distributed when vessels can reach them (which is not always), and tries to induce them to remove to more hospitable lands. There are besides some 2200 Indians. In the brief summer the shores swarm with fishers of seal, cod, salmon, and herring; the remainder is given over to a few wandering Eskimos on the north, to bands of Naskapi, Mistassini, and Montagnais Indians in the interior, and to a few posts of the Hudson's Bay Company.

Politically, Labrador is divided among Quebec, Newfoundland, and the North-west Territories. The former possesses the section on the St. Lawrence and its gulf to Blanc Sablon,—the part draining into those waters, in fact; Newfoundland, the eastern section draining to the Atlantic; the remainder drains to Hudson's Bay. The entire area is about 450,000 square miles, with a length of 1100 and a breadth of 470. Newfoundland's portion furnishes her exports of fish, oil, and furs, of considerable value; the portion belonging to the Dominion government is a vexatious burden.

The Magdalen Islands are a group in the centre of the Gulf of St. Lawrence, 54 miles from Cape Breton, 100 from Newfoundland, and 125 from the county of Gaspé in Quebec; but they belong to the latter, and are an entailed estate in the possession of an English family, that of the heirs of Admiral Coffin. As the inhabitants are nearly all French fishermen,—3800 out of 4316 in 1881,—it is not wonderful that they are emigrating to other Canadian fishing-grounds with great rapidity; another example of seignorial tenure. The group has about 90 square miles of surface; Coffin's Island, the largest, is 25 miles long, but the chief harbor and the custom-house are in Amherst Island.

"Acadia."—The old French province of Acadia is represented in the Dominion by the square block of New Brunswick, on the Bay of Fundy and the Gulf of St. Lawrence; the oblong peninsula of Nova Scotia on both those and the Atlantic also,—the "Markland" of Leif and Thorfinn,—with its satellite, Cape Breton; and Prince Edward Island east of New Brunswick.

NEW BRUNSWICK.

This Province is favored of nature, despite a rigorous climate. It is both continental and insular: surrounded by great arms of the ocean on three sides and with a navigable river along part of the fourth, yet broadly joined to the land; and the water-sheds are so arranged, over its 27,322 square miles of surface (nearly half the size of New England), that it is a perfect net-work of navigable rivers. The Bay of Chaleurs, 90 miles by 15, separates it — with the Restigouche River — from Quebec on the north; on the east are the Gulf and Northumberland Strait (across which lies Prince Edward Island), the former piercing the coast by Miramichi Bay receiving the river of the same name; across an 11-mile neck of land which ties it to Nova Scotia is Chignecto Channel, an arm of the Bay of Fundy enormous in tides; in the centre of the latter is the harbor of St. John, where that remarkable river — 450 miles long, almost encircling the State of Maine, with a basin of 26,000 square miles — enters the sea through a narrow rocky gorge; and at the west is Passamaquoddy Bay, which and the St. Croix form the boundary of Maine. New Brunswick is a mass of great forests, which with its abounding rich fisheries and oyster beds have so repaid labor that agriculture has been little followed except on the coast and in some river valleys, and most of the food eaten there is imported. Of course ship-building flourishes in this land of rivers and hard-wood forests. Of its population of 321,000, over a sixth are French; the remainder chiefly descendants of British immigrants, but a large portion from “loyalist” refugees from New England and New York after the Revolution, — some forced to go, some self-exiled to remain under their old government.

The splendid harbor of St. John, never obstructed by ice, and its unrivalled situation (much resembling that of New York) at the mouth of a great river running through a rich country, have built up a twin city of 39,000 souls, of which 30,000 are in St. John, the rest in Portland close by on the river (formerly its suburb); Carleton of 5000 is the suburb across the harbor. St. John was badly crippled by a fire which nearly destroyed it; but it will have an immensely greater population yet. Fredericton, the capital (6500), is also on the St. John; and the only other considerable villages in this Province which ought to swarm with cities are St. Stephen (3000) on the St. Croix, and Moncton (8700) on the Petitcodiac flowing into Chignecto Channel.

NOVA SCOTIA.

This peninsula, 350 miles long by an extreme of 120 wide, is an island but for the Isthmus of Memramcook 11 miles wide which joins it to New Brunswick, with the Bay of Fundy on one side and Northumberland Strait on the other; the former sends the Basin of Minas (ended by Cobequid Bay) deeply into the rocky coast, which from end to end is a serrated line of inlets, forming admirable harbors little utilized because the 21,731 square miles of territory as yet produces little to export, its very rich mineral treasures being almost untouched. It is formed of a rocky cen-

tral ridge with sterile sides, though the valleys of its short rivers are rich, that of Annapolis and the Minas Basin perfect gardens; the climate is raw and disagreeable, with much fog and cold north-east rain: and the chief employment of its 450,000 people is in the teeming fisheries, which have always been its wealth.

These inhabitants are to a considerable extent from the same "loyalist" stock as those of New Brunswick; but the bulk are from the colonists planted after the miserable devastation of 1755,—which can be accounted for like other outbreaks of frantic hate and cowardly panic, but which, after all excuses and allowances, remains one of the disgraceful affairs of the past which all are ashamed of and try to forget. The district around the mouth of the St. Lawrence, was always a bone of contention between England and France; the peace of Utrecht gave "Acadia" to England, but the name meant nothing definite, the meanings insisted on by the two powers were irreconcilable, and it took just fifty years to settle the quarrel by the total expulsion of France from the north; meanwhile the latter built Louisbourg as a thorn in the side of the English, and incited Indian raids which the Acadians were charged with abetting, though they had taken an oath of fidelity to the English conditioned on not being required to fight for them. The war of 1755–60 became imminent; the English wished to seize the enemy's country without warning, and felt that they could not afford a colony of alien malcontents in their midst; and a detachment was sent into Nova Scotia to carry the inhabitants off to other provinces and make sure they should not return. The order was carried out with shameful fidelity in a part of the province: about 7000 of the people were collected, put on shipboard with a few of their personal effects in such barbarous and unfeeling haste that families were scattered everywhere and many never met again, and sent in squads to the British colonies all through North America; and their houses were burnt and the country laid utterly waste to prevent their return. Many fled to the woods; some starved, some escaped to Canada. Of those departed, many died from the hardships; a very few, after long wandering in pauperism, saw their homes again, but most of them found final rest among French kindred, and some of the refugees across the border also came back a couple of years later, when the storm had blown over. The land was confiscated and divided among new settlers, very largely Celtic Scotch.

The chief city and capital of Nova Scotia, and the great naval station and arsenal of British North America, is Halifax, whose roadstead (including Bedford Basin), in the very centre of the Atlantic coast of the peninsula, is one of the finest in the world. It is the grand coaling station for freight steamers from northern United States ports to Europe, many of them starting with just enough to reach Halifax because it can be bought more cheaply there; and steam lines run from thence to almost every part of the world. It would naturally be one of the grandest emporiums of commerce on the continent, with a quarter of a million of people; but it is only a dull, stationary city of 38,500 people, with a royal dockyard, eleven fortification works, and till recently several regiments of British troops.

There are no other places in Nova Scotia of considerable size. The largest, Dartmouth, had 6249 inhabitants in 1891, and Windsor 2838; and there are a few others of 1000 to 3500.

Cape Breton (3125 square miles) is politically a part of the Province of Nova Scotia, and geologically it is simply the eastern end of that peninsula broken off, leaving between them the reef-obstructed Gut of Canso, 17 miles long by $2\frac{1}{2}$ wide on the average; but its physical structure is strikingly peculiar, as it is cut entirely in

two except for a half-mile of low land (now pierced by a canal), by an inlet of the sea entering in two exquisitely picturesque arms known as the Great and Little Bras d'Or (Arm of Gold), meeting around a long slender island in the Great Bras d'Or Lake, 50 miles long by 20 wide. Cape Breton Island is like a great atoll, its interior all sea-coast as well as its exterior. The northern half is high and bristling with steep cliffs; the southern low and rolling and pierced with bays. Forests and coal are the chief wealth of the 87,000 people beside its fisheries; the first make ship-building flourish, the second occupies 120 square miles in the southern part, around the village of Sydney, which it has built up. This port, the only place of any size upon the island, has but 3700 people, though the harbor is one of the finest in America; the best known place there at present is Baddeck on the northern Bras d'Or, a summer resort for tourists, as indeed is the whole island; but the most historically interesting spot is around the ruins of Louisbourg, the old French stronghold first captured by Phips and his New England militia in 1745, then restored to France, finally dismantled in 1763. The harbor is a fine one, but only a few fishermen use it.

Nearly two-thirds of the inhabitants (55,000) are descendants of Highland and Hebridean Scotch, many of them still speaking Gaelic. About one-seventh are Acadian French.

PRINCE EDWARD ISLAND.

This crescent-shaped island of 2133 square miles — 130 miles long, 34 in its widest part and 4 in its narrowest, and nearly divided into three sections by arms of the sea, which make its coast a mass of bays and headlands, — has advantages of soil and climate — which give it the name of "Pearl of the Gulf." The soil is a fertile, almost stoneless loam, gently rolling, without mountains; the climate is much milder than that of New Brunswick just west across the strait, though the sound is frozen several months in every year and communication is carried on by means of ice-boats.

Ship-building, fisheries, and agriculture maintain its 109,000 inhabitants; it is chiefly known to the United States as the great potato garden of the North. The capital and only large town, Charlottetown, has 11,374 people; it lies on the deep bay of Northumberland Strait which makes the easternmost peninsula.

After the English wrested this island from the French by whom it was first settled, they attempted to colonize it by parcelling it among sixty-seven persons who had claims against the Crown, on condition of their *bona fide* settlement there, building churches, etc.; their sections were determined by lot. The lot-holders, however, broke the conditions, speculated in and sold their lots, few of them ever went there, and for a century the island was peopled by tenant-farmers of absentee landlords. The island having become a Province of the Dominion in 1873, the government in 1875 bought over 880,000 acres from the landlords and resold it in fee to the tenants, who have taken nearly the whole.

The dominant part of the population, and nearly half the whole number, are Gaelic Scotch; the westernmost of the three peninsulas is largely peopled by Acadian French.

NEWFOUNDLAND.

This remarkable colony is the most peculiar of all British settlements in America; and its peculiarities are due to the peculiarities of its history. It was for generations merely a fishing camp, sternly prevented from being anything else; it is principally a fishing camp still, and the isolation of its physical location, the isolation of its (for a long time) half-outlawed inhabitants, the smallness of their number, and the singular international relations to which it is still subject, have till recently kept the interior of this great island, nearly two-thirds the size of New England (42,750 square miles), as much a *terra incognita* as the basin of the Congo.

It is the outermost eastern thrust of North America toward Europe, curiously corresponding to an indentation on the west; and with Nova Scotia and Cape Breton bars the St. Lawrence gulf in a measure from the ocean. Its surface resembles that of Greenland, — a barren plateau without high mountains, sloping down to bold rocky shores pierced infinitely by deep sheltered inlets. Eastern and south-eastern Newfoundland is a duplicate of Western Scotland, — a mass of peninsulas and immense bays running from 50 to 100 miles in; and it is bordered by thousands of small islands. The south-eastern terminus is the great peninsula of Avalon.

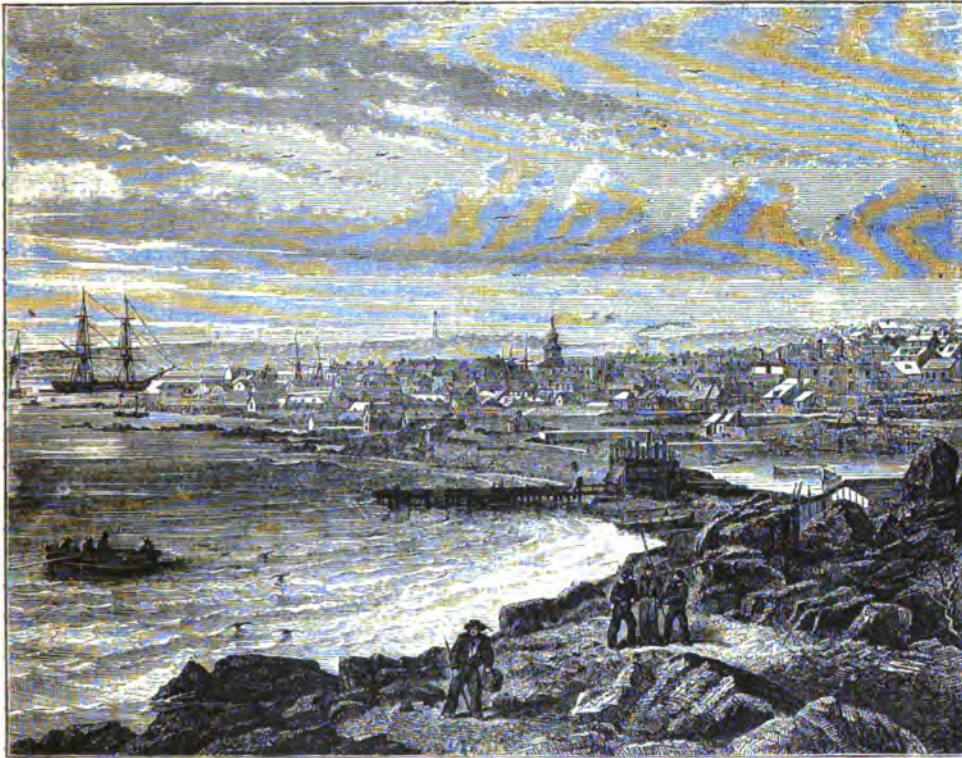
The interior of Newfoundland is chiefly great stretches of sterile prairie covered with wild grass and supporting vast herds of reindeer, swamps and woods bordering the streams, rock and gravel waste, and such multitudes of lochs straggling on rivers that a third the surface is water. Great Lake is 56 miles long and 192 square miles in size, and there are several others from 20 to 40 miles in length. The River of Exploits is 200 miles long with a basin of over 3000 square miles, the Gander drains 2500, the Humber 2000 — all emptying into grand estuaries. The valleys have much fertile land, but it is nearly uncultivated; and the chief products of the island are copper (in which it ranks sixth in the world), coal, and iron. The climate is both mild and equable for its northern latitude. The rainfall is very heavy, averaging 58.30 inches, owing to the conflict of the polar current and the Gulf Stream which covers the ocean off its shores with thick fogs; but those fogs do not much invade the island.

The Banks of Newfoundland have been the wealth of others, but its own ruin, owing to the stupid greed and national rivalry they have spread. They are a vast shoal or submarine table-land, extending 350 miles eastward with a breadth of 275, covering perhaps as much surface as Newfoundland itself. Some think they were formed by melting icebergs dropping their loads of gravel here. The two ocean currents are laden with animal life which fishes feed on, and the cod — whose native name, *avalon*, gave its first name to the island — flock there in millions, and make with the great seal fisheries the chief business of the inhabitants.

The history of the island has been of the wretchedest kind. Fought over by English and French till the peace of Utrecht, that settlement was only the beginning of worse troubles. It left the west and north-east shore as the monopoly of France to fish from though not to fortify it, and she retains it to this day, even the Newfoundlanders having no right to settle there, and that portion being nearly as waste as the polar regions. Worse yet, England itself, hoping to have the entire catch of fish benefit English trade, absolutely prohibited any one from building a permanent dwelling there or remaining after the fishing season, and those who did so had their huts demolished. In fact, the colonial theories of the time were simply carried to a

logical conclusion in this case. All powers wished their colonies to remain weak and dependent; Spain made slave-pens of hers; England went a step farther and prevented the foundation of any colony at all. The War of the Succession, however, relaxed official vigilance and drew off the police forces, and a few thousand were found living there when it closed; and the government at last acquiesced in the inevitable, and in 1728 appointed a governor and council for the undesired colony. But the restrictions against settlement were not wholly removed till well into this century, and representative government was not granted till 1832.

This isolated people—197,335 in 1884—steadily refuse to share the burdens or the glory of the far-off Dominion. They live on the southern and south-eastern



ST. JOHN'S, NEWFOUNDLAND.

coast, about half of them on the peninsula of Avalon; they are largely of Celtic descent. The only large place is the capital, St. John's, with 28,610 people in 1884; it is on Eastern Avalon, with a deep spacious harbor, through the entrance to which only one vessel can pass at a time. Harbor Grace on the same peninsula had 6700.

Newfoundland Labrador is the eastern portion whose waters flow to the Atlantic, and furnishes the colony some furs and oil.

St. Pierre and Miquelon are barren rocky islets off the centre of the southern coast of Newfoundland, belonging to France (the sole remnant of her North American empire), where French vessels put in during the season to cure their fish. Miquelon has about 70 square miles of surface, St. Pierre 20. They contain some 6000 people; St. Pierre is the chief settlement.

THE CANADIAN NORTH-WEST.

To the artist, the sportsman, the ethnologist, or the geographer, the immense territory which extends from the bleak rocks between Lake Superior and Hudson's Bay to the enormous wall of the Rocky Mountains, and from the wheat-fields of the Red River Valley to the Frozen Ocean, is a land of inexhaustible interest; but in the perspective of the world, other considerations must determine its space. Noble rivers that might enrich great provinces, palsied wastes that might be great provinces, fresh-water oceans or ocean gulfs that will know no great ports,—these are more fascinating to the poetic spirit than the homes of prosaic millions; but we must remember that our real problem is to know where and how the millions live.

The Hudson's Bay Company.—Till a few years ago, the whole of this enormous territory belonged as a trade preserve for the fur traffic to one of those great trading and governing corporations which rose in the Middle Ages to carry on commerce in barbarous countries. Originally founded by Prince Rupert and fourteen others (whence the territory was till recently known as "Rupert's Land"), its monopoly was injured by the formation in 1783 of the rival North-west Company; and after fierce opposition and some actual battles between bodies of their employés, they were consolidated in 1821 and the new company licensed for 21 years more. This was renewed in 1838 for 21 years; and after its expiration in 1859 it was never renewed, so that the company since then has had no exclusive rights,—but the vast capital and vaster experience and trained skill required make it a natural monopoly. The association's office is in London, but it keeps a "chief commissioner" in Canada; and 136 posts or depots, with 1700 employés, all over this enormous tract, and also all around Hudson's Bay and through Labrador; its northernmost post is "The Ramparts," where the Porcupine River strikes the Alaska border almost at the Arctic Ocean. Its employés are mostly French and Scotch half-breeds (the Scotch principally from the Orkney Islands) and Indians, who hunt the fur-bearing animals.

This company has been accused of concealing the value of the country in order to maintain its monopoly; but there seems no warrant for the charge. The settlement of the Canadian North-west followed close on that of the United States North-west, and a colonization was attempted by Lord Selkirk and permitted by the company—who sold him in 1811 the land around the Red and Assiniboin now forming the heart of Manitoba—as far back as the time when most of Ohio was a wilderness. Fort Garry was the nucleus of this settlement. The company in 1836 bought back its rights, but exercised them so loosely as to leave the amplest chance for growth. In 1869 it sold all its proprietary rights to the Dominion government for £300,000, reserving a little space around each post and some excellent land in the Saskatchewan Valley. The Dominion appointed a government and sent it to take possession, unthinkingly omitting to prelude this act with a guaranty to the original settlers of security in their holdings; and the surveyors who came to lay out the country for colonists divided up (on paper) quantities of the old inhabitants' lands among themselves and their friends, and treated the owners with insolent defiance. Under the leadership of a half-breed, Louis Riel, a few of the latter refused to receive the Dominion officers, and set up a provisional government of their own; occupied Fort Garry, and for several months maintained themselves on the provisions, and the



A CANADIAN TRAPPER.

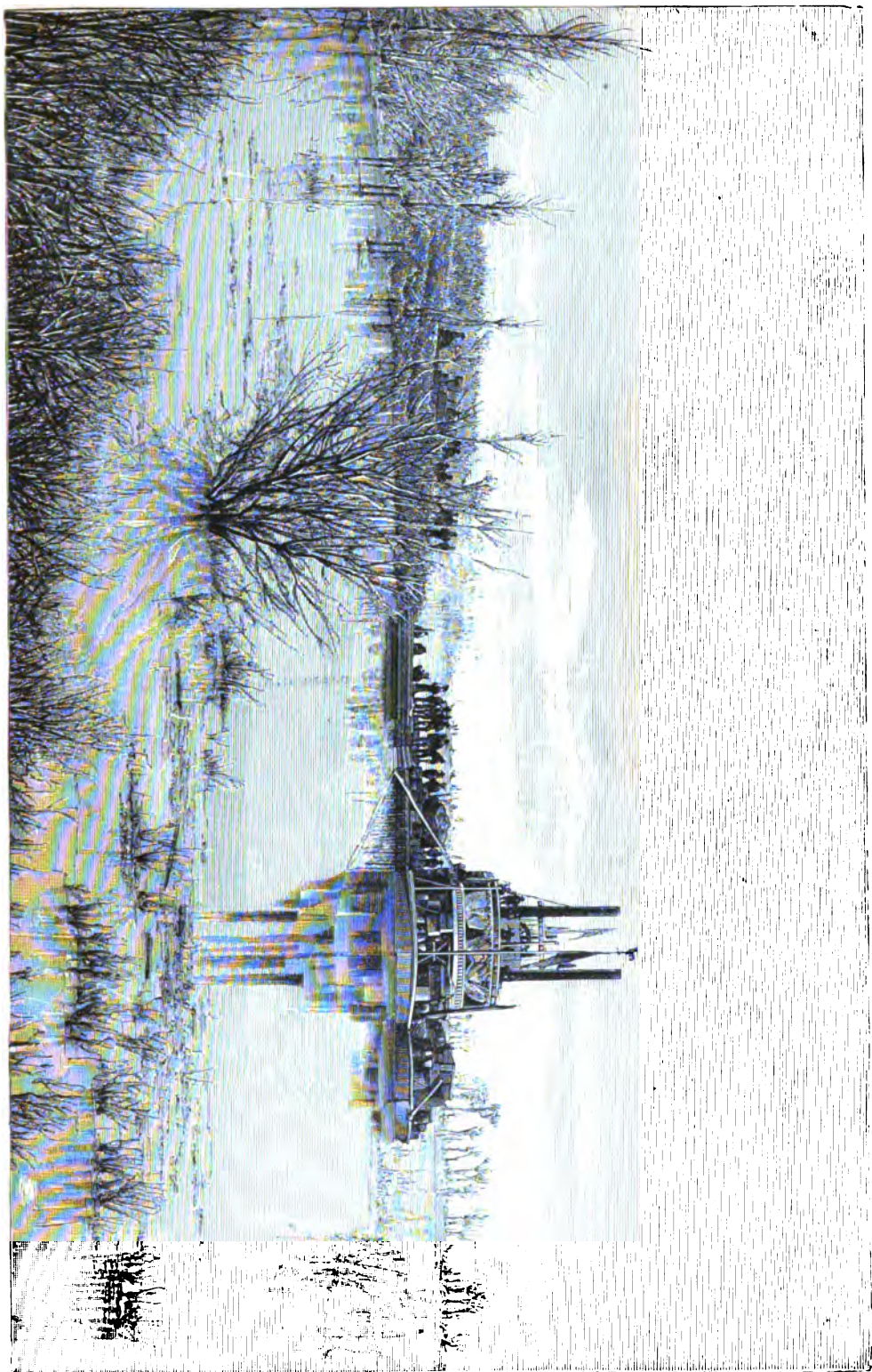
money of the Hudson's Bay Company. A military expedition reduced the insurrection without fighting, the leader absconding to the United States; he headed a fresh rising on the same grounds in 1885, among the settlers on the Saskatchewan in the North-west Territories, 500 miles north-west of Winnipeg, with re-enforcements of wandering Indians, and was captured and hanged. Out of the newly acquired lands, the Dominion, having given the old settlers the bill of rights they asked for, carved out a new Province, Manitoba, and the North-west Territories, leaving the remainder for future action as "Unorganized Lands" under government control.

Physical Character of the North-west. — This region, excluding the Ontarian part, is substantially a rectangle with the greatest length north and south: the lower part is the splendid basin of the Saskatchewan with the Canadian Great Lakes and the satellite rivers; the western half above the vague Saskatchewan water-shed is the basin of the Mackenzie; and the eastern portion is a worthless and mostly Arctic land which nature has made a game preserve.

The Mackenzie is a magnificent stream, an Amazon of the north, one of the largest in the world. Its farthest source is the Athabasca, a large river rising in the Rockies opposite British Columbia, close to the sources of the Saskatchewan, and flowing 1000 miles first east and then north till it empties into Athabasca Lake, — a huge loch, 230 miles long and only 12 to 15 wide, lying east and west, a chasm in rocks and sand with islets of bare rock. The river which issues from it, called Stony River, unites 12 miles beyond with the great Peace, 1100 miles long, starting higher up in the Rockies, and the confluent stream, called the Slave River, flows into Great Slave Lake, another loch of immense size parallel with Athabasca; 350 miles long, with a width from almost nothing up to 40 miles, a fantastic collection of inlets joined together by straits, frozen over most of the year. It receives several other considerable streams, and the Mackenzie issues from it three-fourths of a mile wide; swelled by the Liard and by the outlet of Great Bear Lake, an immense straggling body of water, perhaps more than twice as large as Lake Ontario, nearly always frozen over, — it empties into the Arctic Ocean by several mouths, after a total course of 2500 miles, draining a nearly worthless basin of towards 600,000 square miles.

The latter system and its surrounding lands make the future of Western Central Canada. The lands are substantially a vast prairie with a fringe of forest, and the western streams bring down immense quantities of mud to fill up the great lakes into which they pour, and which are shallow with low swampy shores. In the centre of the section are the two Canadian inland seas, lying north and south and reaching almost to the United States; they are true drainage lakes at the foot of immense basins, and remnants of a far larger one once existing. The greatest of the two, Lake Winnipeg in Western Central Canada, is nearly as large as Lake Erie: it is 240 miles long by an extreme width of 55 and an average of 35, with an area of 8500 square miles. Parallel with it on the west lie two lakes connected by two short rivers and a pond, the whole called the Water Hen River, Manitoba on the south and Winnipegosis on the north, each about 120 miles long by an average of 17 or 18 wide, making about the length of Winnipeg and half the area. They drain into the latter by the Dauphin from Lake Manitoba.

The streams which drain the great basin (except a few brooks) pass around Manitoba and Winnipegosis to the north and south and empty into Winnipeg, — the Saskatchewan discharging into its northern end and the Red and Winnipeg into the southern. The former river, one of the great streams of the world, is known in its



ON THE RED RIVER OF THE NORTH.

main course as the South Branch till it joins a lesser arm, the North Branch, about 105° W. Both rise in the Rockies east of British Columbia; the latter not far from the source of the Athabasca, in the culminating northern point of the Rockies 12,000 to 16,000 feet in mass, almost at the feet of Mounts Brown (16,000 feet), Murchison (15,789), and Hooker (15,700), the former farther south on the chain; the length of the South Branch is about 875 miles to the junction, of the North Branch about 800. Both are swift muddy streams, the latter clearer and much colder than the former. The combined river flows through a swampy delta and into the shallow muddy Cedar Lake, about the size of St. Clair, and finally into Lake Winnipeg after passing over a tremendous rapid two miles long. The river which flows out of Lake Winnipeg, sometimes known as the Nelson, is properly the Saskatchewan also, though enormously re-enforced: it has a course of some 400 miles through primordial rocks, descending 650 feet from the lake to Hudson's Bay, its dark wide stream broken by immense rapids; "a vast murky river, rough, harsh, and turbulent, sometimes a lake, sometimes a gorge." At the southern end of Winnipeg Lake, three rivers take the drainage of west, south, and east. From the first point comes the Assiniboin, of small volume, whose chief affluent the slender Qu'Appelle rises in the same swamp as the South Saskatchewan; from the south, the Red River of the North, a tortuous trench in caving soil, rising in Minnesota within ten miles of the Mississippi, — its fertile basin first drew the tide of settlement northward through Dakota to the Manitoba regions: the Assiniboin joins it at the city of Winnipeg, of which Fort Garry was the precursor and nucleus, and the two, as the Red River, flow into the lake 40 miles farther on. The Winnipeg is a set of lakes and rapids and cataracts in a channel of sombre rocks. Its remote source is a string of lochs connected by brooks, starting just west of Lake Superior and running into Rainy Lake, a great irregular loch 100 miles long and 1092 feet above the sea, — the whole forming parts of the Minnesota boundary between the United States and Canada. These waters are taken by Rainy River, a navigable stream 80 miles long and several hundred feet wide, to the Lake of the Woods (both these still belonging to both countries). From thence to Lake Winnipeg, in a course of grand wild beauty, it falls nearly 400 feet in its stoue channel.

It will be noticed that the Canadian Great Lakes form a strong line of demarcation between two utterly different sections of country. To the west, the country in general is a crumbling and fertile prairie; to the east it is rocky, sterile, and forbidding, for enormous distances. The best portion, next to the United States, is divided into Manitoba around the Lakes, Assiniboia next west, and Alberta extending to the Rockies; above Assiniboia is Saskatchewan with the same northern boundary as Alberta, and reaching east to include the north half of Lake Winnipeg; Athabasca lies above Alberta along the Rockies (the last four are administrative divisions of one large body, the North-west Territories); east and north of Manitoba is its satellite Keewatin; and outside of these are the Unorganized Lands.



CANADIAN LUMBERMEN.

MANITOBA AND THE NORTH-WEST TERRITORIES.

Manitoba (60,520 sq. m.) includes the lower Red and Assiniboin valleys, Lake Manitoba, and most of Lakes Winnipegosis and Winnipeg. It is the only section of Canada besides Quebec where the French element is accorded governmental recognition as a separate race, allowed to be judged by non-English law. St. Boniface, opposite Winnipeg, is a Roman Catholic archbishopric, and the French inhabitants are mostly in the section from there east and south. Their actual numbers are not very great,—10,000 in 1881 out of 66,000; the immigration of English, Scotch, Irish, Scandinavians, etc., since then has been so great that its population, returned by the census of 1891, is 154,442, and no element but the French Canadian re-enforces the French Canadian,—all the rest go to swell the Anglo-Saxon tide and drown out the older race. The capital of the Province is Winnipeg, the only large place of the Canadian West, but whose development has rivalled the greatest marvels of American city-growing: it was a hamlet in 1875, it had nearly 8000 inhabitants in 1881, and in 1891, 25,642.

Keewatin (400,000 sq. m. [?]) extends theoretically from Ontario and Minnesota to the North Pole, and from Hudson's Bay to 100° W. It may yet have some importance from mining discoveries, its share of Lake Winnipeg, and the attempted railway opening up to Hudson's Bay.

The North-west Territories.—This body corresponds to a Territory of the United States: it has no share in governing the Dominion, but the inhabitants have local self-government while waiting for their future to shape itself. The former capital, Battleford in Saskatchewan, was on the North Saskatchewan, 525 miles north-west of Winnipeg; the present, Regina in Assiniboia, is a village of 1000 people on the Canadian Pacific Railroad, 356 miles west of Winnipeg, south of the Assiniboin, and not far north of the United States border. The same short-sightedness in not allaying the fears of old settlers before plotting out the section produced the same sort of rising as at Fort Garry, but much more serious and murderous; in both cases the insurrection was unnecessary, as a petition to the Dominion government would have accomplished the same thing. The inhabitants are Indians, half-breeds, and the oncoming European settlers; there were 99,700 at the last enumeration, nearly half of them Indians. The body for administrative purposes is divided into four principal sections.

Assiniboia has 95,000 square miles, and is a block around the Qu'Appelle (a long brook), taking in on the west a part of the broad, deep, and rapid South Saskatchewan; it is rolling prairie and steppe. It is for postal and other purposes divided into East and West Assiniboia.

Saskatchewan (114,000 sq. m.) has its fertile portion on the west, in the great central valley, and stretches along the tops of Winnipegosis and Winnipeg to the district of Laurentian rock. It is virtually unoccupied, but is opening to settlement.

Alberta (100,000 sq. m.) is prairie, steppe, and some woods on the east, foot-hills gradually rising to the summits of the Rockies on the west; it includes the early waters of both the North and South Saskatchewan and of the Athabasca.

Athabasca, 122,000 square miles, has as yet practically no civilized inhabitants. It too lies against the Rockies, extending north to the uninhabitable lands; its surface is almost identical, part for part, with that of Alberta, and it lies upon the valleys of the Athabasca and the Peace.



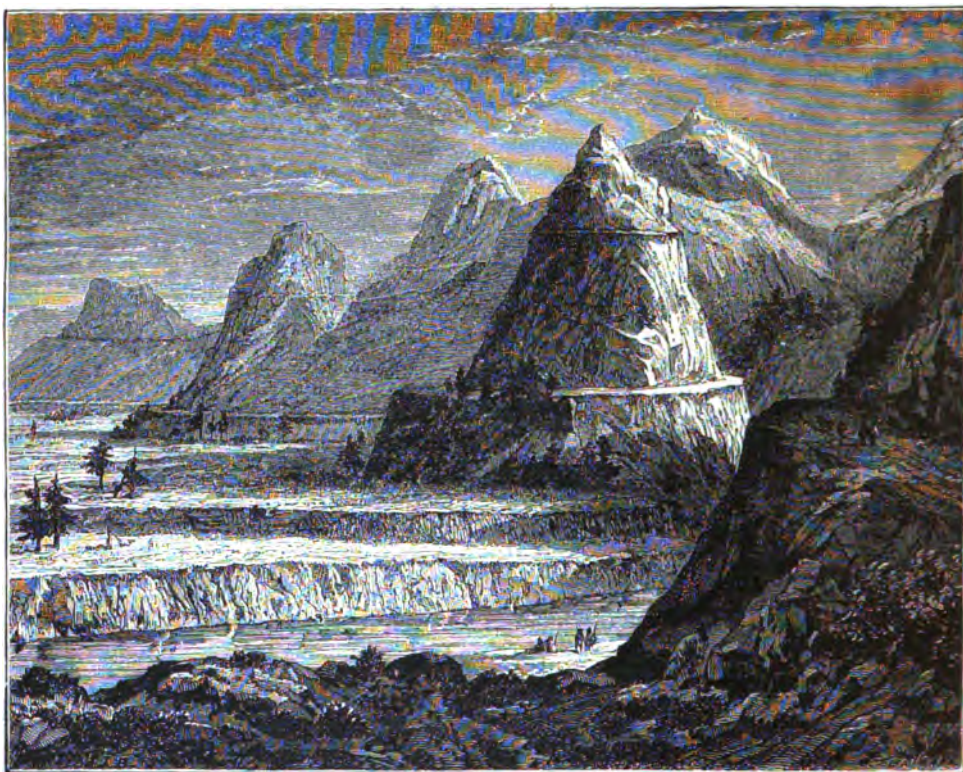
IN BRITISH COLUMBIA.

BRITISH COLUMBIA.

This Province, laid out on arbitrary parallels in defiance of natural boundaries,—extending from the United States to 60° N., and from the Pacific to 120° W., thus including the upper Peace and Liard valleys east of the Rockies,—is a land of mountains and high table-lands clothed with forests, with sharp rocky shores deeply pierced with inlets and abounding in good harbors, but with relatively little good arable land. Its lower portions share in the mild climate which the shelter of the mountains and the Kuro Shiwo give to the Pacific Coast, but the warm current in this high latitude produces such heavy and protracted rains and fogs that the weather is nevertheless very disagreeable. The country is chiefly valuable for its mines, timber, and fisheries, all which will yet make it very prosperous: its gold deposits are extremely rich, and those on the Fraser first drew a stream of immigrants to it, and its fisheries are among the finest in the world. Its ocean frontage is superb: along its lower border lies the splendid Puget Sound, the “Mediterranean of the Pacific,” a broad deep gulf running for hundreds of miles in Canada and the United States between high rocky shores close to which the largest ships can approach and load; across this, the road to the Pacific, lies the great Vancouver Island, itself sufficient for a powerful province; and a long stretch of Pacific shore is again barred off next to Alaska by a considerable

archipelago. It has two large rivers, — the Fraser, a powerful stream taxing the energies of strong steamers, navigable for 110 miles from the Sound into which it falls; and a part of the Columbia, which runs south into the United States, then turns west and flows to the Pacific. It has an area of 390,344 square miles, six times as large as New England, and had in 1881 a population of 49,459, of whom 25,661 were Indians and 4316 Chinese, the Canadian French being very few. There are now nearly 93,000 inhabitants, and the Chinese have increased very greatly.

Vancouver Island is a noble piece of land, 290 miles long by 50 to 65 broad, with about 14,000 miles of area (nearly twice the size of Massachusetts). It is a forest-clad crag, with high bold rocky shores deeply sea-pierced, and full of small mountain

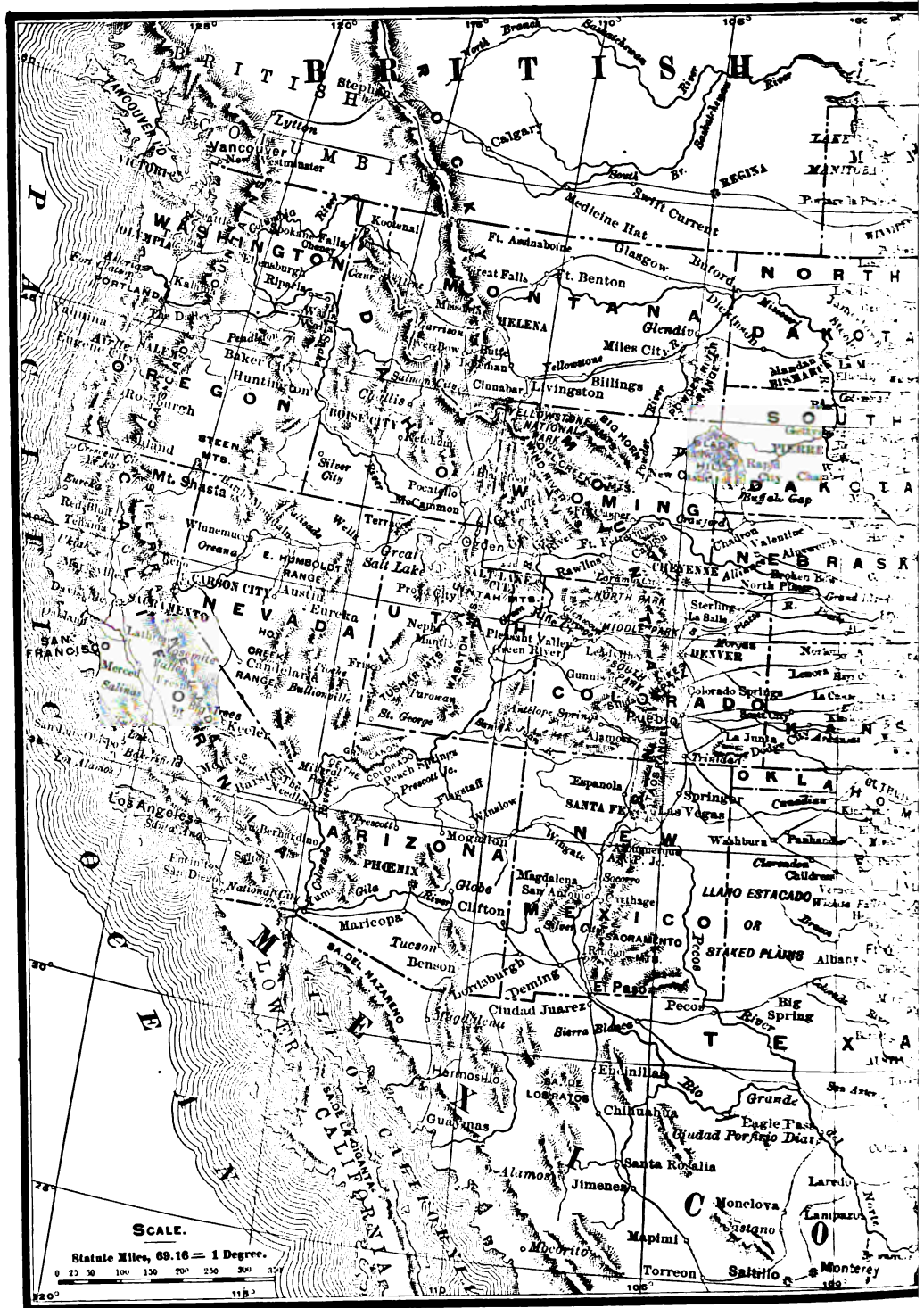


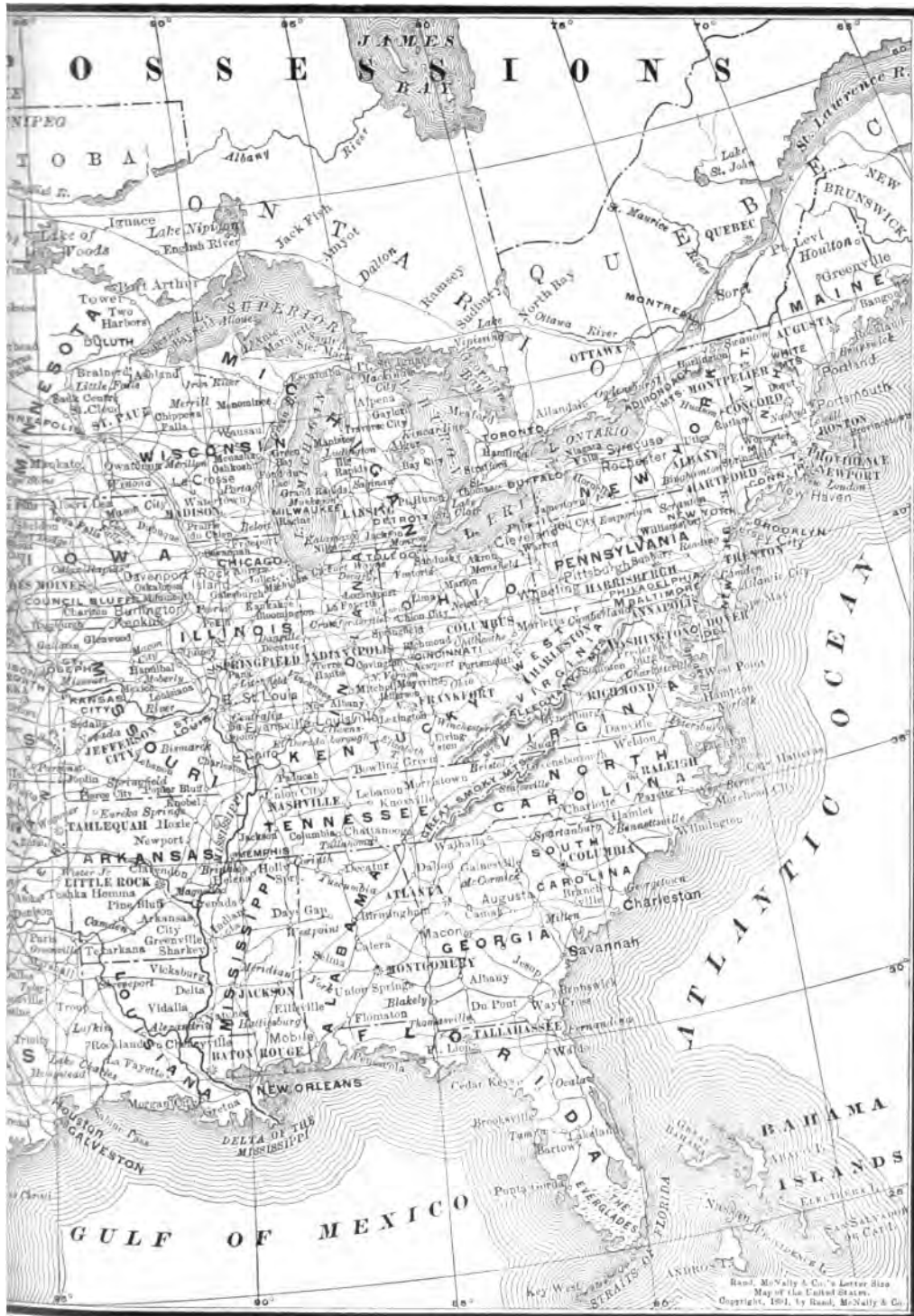
THE FRASER TERRACES.

lakes and torrents. It is rich in coal and building stone as well as fish, timber, and harbors; and its climate is better than that of the mainland. In 1891 it had 36,767 inhabitants.

On this island is the capital of the colony, Victoria, with 17,000 inhabitants; it lies at the southern extremity on Puget Sound. New Westminster, the former capital, 10 miles from the mouth of the Fraser, has about 7000, and Nanaimo on Vancouver 4600. Yale will be important as the head of navigation on the Fraser.

Queen Charlotte's Islands, just below Alaska and 150 miles north of Vancouver, are a group of considerable size, containing good harbors, good soil, and good forests, excellent copper, gold, and iron ores, and first-rate coal; but similar resources farther south are still too abundant to promise immediate glut of people in this northern climate.





THE UNITED STATES.

Extent and Form. — This enormous republic, the first in the world which has ever succeeded in covering a large territory without soon ceasing to be a republic, occupies (excluding Alaska) the central half of the northern continent, stretching from ocean to ocean, and from 49° N. to 24° 30' S.; that is, from the sub-Arctic temperate regions to the tropics. From Cape Cod to the Pacific as the crow flies is nearly 2800 miles, and from Minnesota to Texas 1600; its boundary with Canada is 3540 miles, and with Mexico but 1550, owing to the chasm of the Gulf. It has a land area calculated at 3,025,600 square miles (exclusive of Alaska, 531,410), with water surfaces making up nearly 3½ million. In extent of territory it stands fourth among the powers of the world, the British, Russian, and Chinese Empires alone outranking it.

The Alleghanies: Rivers and Lakes; Coal and Petroleum. — On approaching the United States from the east, we see on the horizon the long, narrow ridges of the Alleghany Mountains. A few hours of travel inland bring us into the wooded valleys where evergreens and deciduous trees intermingle along the banks of streams, the waters of which are utilized to run mills, factories, and shops. The people of the United States navigate every navigable water-course and enchain every torrent strong enough to set machinery in motion. In these eastern regions nature often furnishes the power necessary to carry on these various industries, making the construction of artificial dams unnecessary. Most of the Alleghany streams descend into the lower valleys by powerful cataracts, and hundreds of manufacturing towns, such as Lowell, Lawrence, Manchester, Paterson, Pawtucket, and Rochester, owe their existence to waterfalls.

The Alleghanies, or Appalachians, as the entire system is more properly named (including all the ranges between the Atlantic and the Mississippi, and from the Province of Quebec to Alabama), are of mediocre elevation. In the south, they reach an altitude of 6707 feet; the highest peak in the north — in the chain known as the White Mountains — is only 6285 feet above sea-level. Though largely granitic in the north, in Vermont, New Hampshire, and New York, and again in the south, in Carolina, Georgia, and Alabama, they nevertheless embrace extensive sections of limestone and chalk, and the parallelism of their numerous ranges gives them a singular likeness to the French Juras.

Between two of the chains, the Adirondacks and the Green Mountains, on the threshold of Canada, at an altitude of only 98 feet, lies the lovely Lake Champlain, — the witness of war scenes famous in the history of the country; it is 125 miles long, with a breadth varying from a few hundred yards to 15 miles; the transparency of its waves is remarkable, and the bottom can be seen through 50 or even 60 feet of water. The greatest ascertained depth, according to good authorities, is 600 feet. The lake is drained on the north toward the Saint Lawrence by the Richelieu River; its southern point is not far from the Hudson River, with which it is connected by a navigable canal. The Hudson, Champlain, and the Richelieu stretch due north and south, forming a single basin in which once rocked the waters of a vast fiord.

The Alleghanies arrest the winds from the Atlantic, and therefore exert an important influence over the climate of the Mississippi basin, which is less temperate and less moist in the same latitudes than are the valleys of such coastal streams as the Hudson, the Delaware, the Potomac, and the James.

Owing to the limestone character of the central Appalachians, phenomenal features of rare grandeur are frequent in this rocky nature—subterranean rivers, vanishing floods, hidden waterfalls, grottos, and bubbling fountains. Mammoth

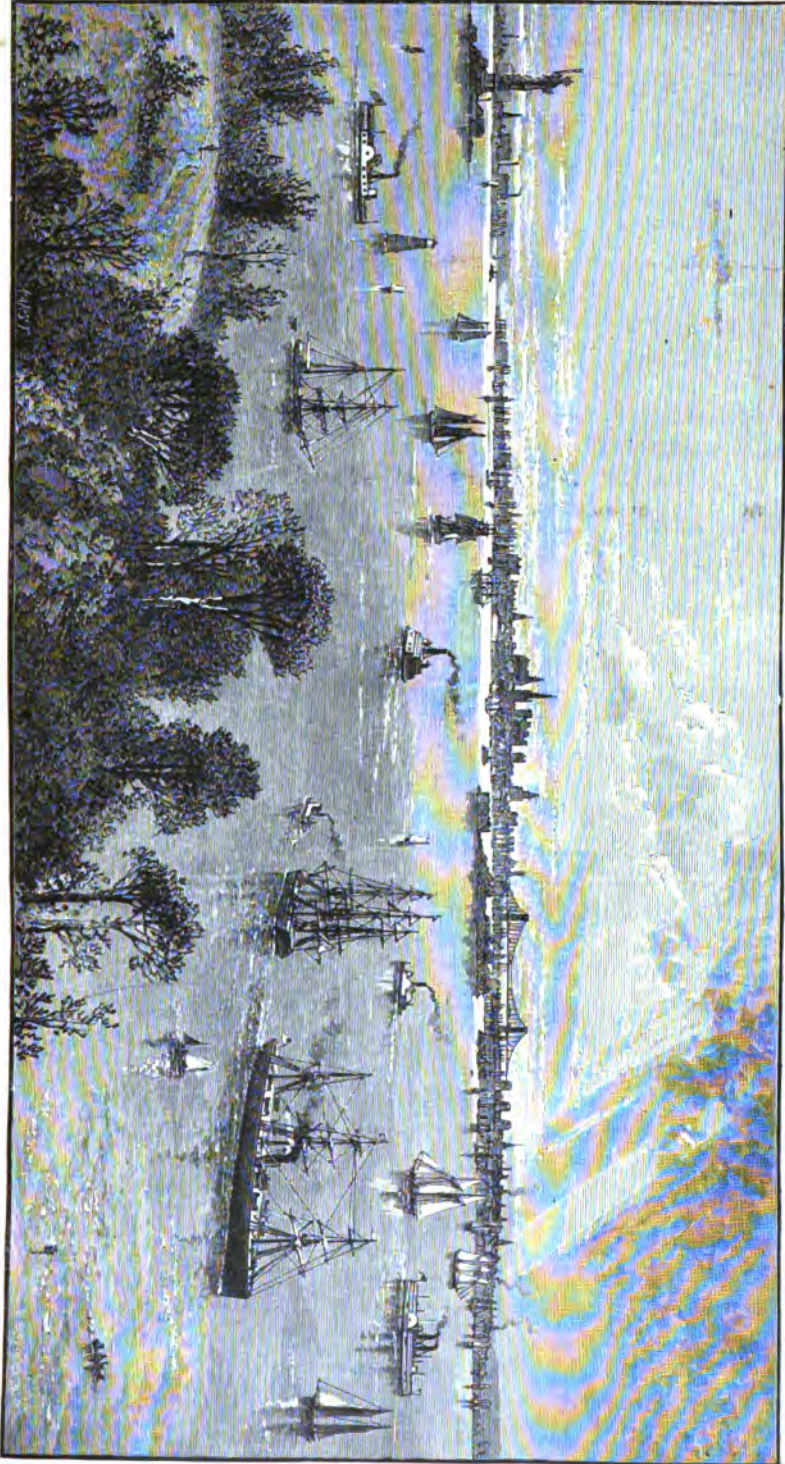


A GEYSER BATH IN THE YELLOWSTONE PARK.

shadowy flood when the rains which fall in the beautiful basin of the Green River arrive by their mysterious paths, and, mounting along the rock, fill the dusky channels to the very key-stone of the arches.

We rarely know whither the sinister waters, half revealed to the torch in a thousand grottos of the Alleghanies, are fleeing in search of rest. Sometimes, perhaps, they glide from one black basin to another, as far as the Atlantic: along the shores of Carolina, Georgia, and Florida, rivers leap in places from the sea-bottom with such force that their floods appear on the surface of the ocean. These hypogean currents have been known to send up streams of sufficient size to half freshen the briny waves. Others come to the light before reaching the coast, and often out of the shades of some subterranean marble palace suddenly springs from a perennial foun-

Cave, in Kentucky, is unrivalled throughout the world; the diameter of the area of the whole cavern is less than 10 miles, but there are 223 accessible avenues, which measure together 150 miles in length; it contains chambers so vast and so lofty that their blackness is but feebly penetrated by the glow of the visitor's torch; under the vaults are lakes which absorb or discharge the waters of other lakes through rivers winding in blind corridors. Two of the streams in Mammoth Cave have been named after the mythical Styx and Cocytus of the lower world. Strange animals, eyeless fishes, lizards, hideous crickets, gigantic rats, and doubtless timorous, creeping creatures as yet unknown, live in the gloomy waves and along the banks which the Echo, the Cocytus, the Styx and the other leaden currents of the cavern abandon in their summer retreat; these banks are inundated by the



THE ENTRANCE TO NEW YORK HARBOR.

tain a sparkling river which has left all its miry impurities in lakes lying deep under the soil.

The Appalachians hide in their recesses unfailing supplies of anthracite and bituminous coal. The coal basins of the United States are unrivalled except in China. After England herself has exhausted all her coal-beds, the people of the United States will still be extracting from the bowels of their mountains the black food of the hearth, the forge, and the engine. The great Appalachian coal-fields, occupying parts of Pennsylvania, Ohio, Virginia, West Virginia, Kentucky, Tennessee, and Alabama, are estimated to cover 60,000 square miles of surface that can be profitably worked. And again, three-fifths of all the land of Illinois belongs to the productive coal-field.

Beside these mines, the Appalachians contain inexhaustible deposits of magnetic iron-ore, with still other minerals; and, as though all these treasures were inadequate to supply the wants of the great Union, another marvellous source of wealth exists in petroleum-springs of fabulous abundance.

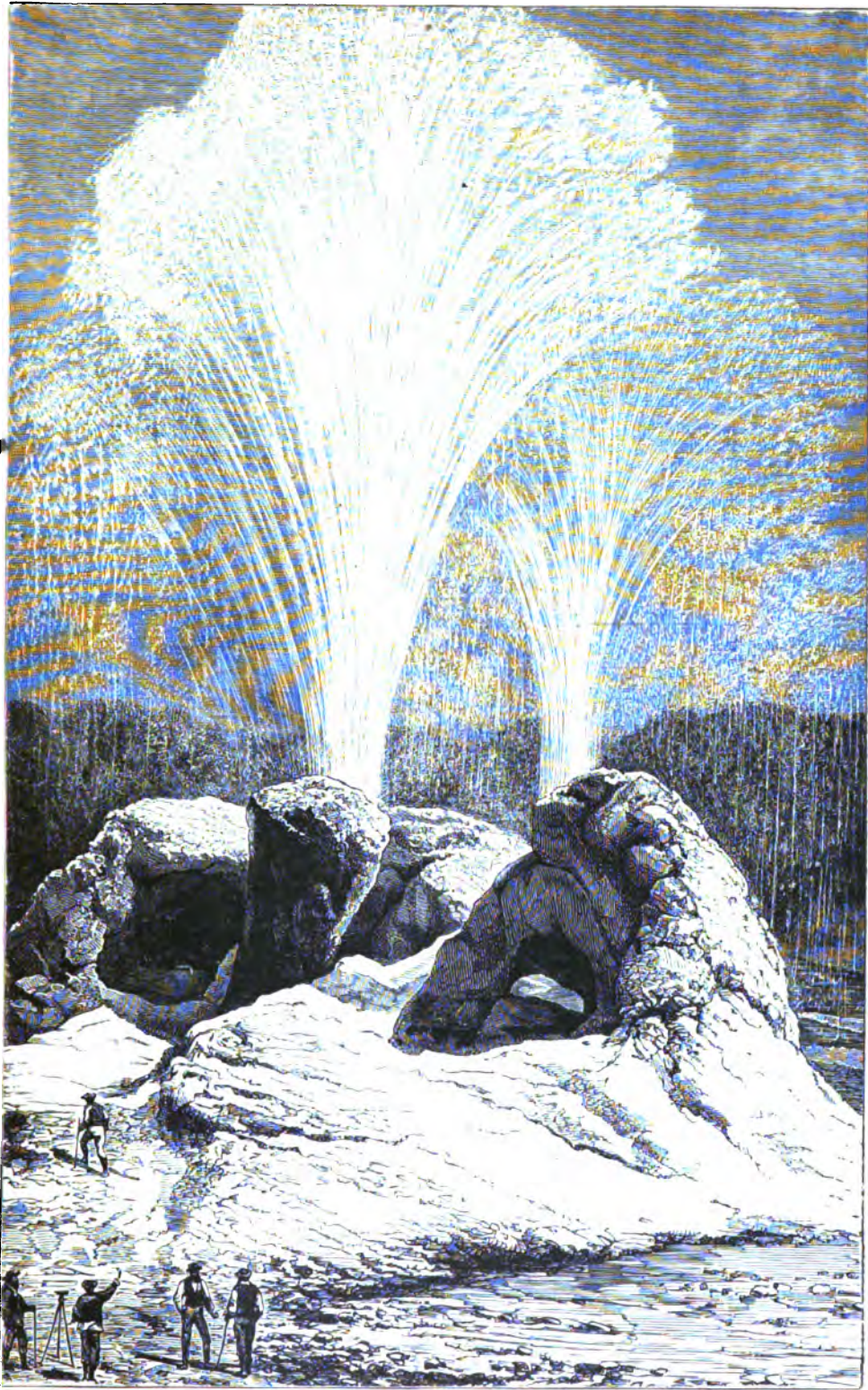
The Ohio, Mississippi, and Missouri. — Pittsburgh, the "iron city" of tireless trip-hammers, the manufacturing centre of this vast iron and coal district, is situated at an altitude of 679 feet, at the confluence of the Alleghany and the Monongahela, two broad, swift rivers which united form the Ohio. Through the Ohio and its affluents, the Kentucky, the Cumberland, and the Tennessee, all the springs of the western slope of the Alleghanies empty their waters into the distant Mississippi. The Ohio, with a length of 975 miles, a width varying from 500 yards or less to 1400 yards, and a catchment basin of 214,000 square miles, carries an average of 158,000 cubic feet per second over its island-encumbered bed¹; but these figures are misleading, for the large mean volume results from enormous floods which compensate for an excessively scant discharge in the low-water season. At Cincinnati, the most important city on its banks, the stream has been known to rise 62 feet above low-water mark, but it also falls at times so that it carries at Wheeling less than 1800 cubic feet per second.

It is near Cairo, at an elevation of 275 feet, that the Ohio empties into the muddy Mississippi; it retains for some distance along the bank where it enters the hue which has won for it one of its Indian titles, signifying White River; but the Mississippi prevails, and the entire stream is soon one flood of moving mire.

The first European who gazed upon the Mississippi was probably Hernando de Soto, a Spanish adventurer who was exploring the country (1541) — not for stream, nor lake, nor mountain, but for the fabulous treasures of gold which, it was thought, made Florida another Peru.

The source of this mighty river, unlike those of most great streams, lies close to populous districts, a visit to it the by-play of a hurried tourist; namely, Lake Itasca in Minnesota, or *Lac de la Biche*, 3160 miles (by its waters) from the Gulf. Considering the Missouri as the principal artery, the Mississippi is about 4400 miles in length; it is the longest stream in the world, outranking the Nile itself.¹ Lake Itasca occupies a depression 1575 feet above the sea, in a plateau which no marked elevation separates from the basins of the Saint Lawrence and Nelson. The name of the little lake has a jaunty Indian air, but there is hardly a less savage and more pedantic title than this. We are indebted for it to an American author, geologist, and explorer, Henry

¹ Late measurements make the length of the Missouri-Mississippi 4194 miles.



A GEYSER IN THE YELLOWSTONE NATIONAL PARK.

Rowe Schoolcraft, who visited the region in July 1832. Scorning the French term of *la Biche* and finding the Indian term too long (who could blame him for rejecting the name Omouskosisaougawigoum?), the explorer took the Latin words signifying "truth" and "head" or "source," *veritus caput*, from three syllables of which he formed the name Itasca. A small body of water lying beyond this lake, frequently accredited as the true source, is in fact only a bay of Itasca whose neck has been silted up into a seeming brook in the last two centuries. After passing at less than 65 miles from Lake Superior, and having acquired considerable force, the Mississippi enters the prairies, or grassy plains, which are in part the bottom-lands of that ancient fresh-water Mediterranean of which the five Great Lakes are remnants.

At Saint Anthony the young stream falls from 18 to 20 feet¹ in a cataract which industry has utilized to run saw-mills and grain-mills, and a little farther down, it bathes Saint Paul, the capital of Minnesota, a city whose dry, cool, invigorating climate attracts thither large numbers of invalids.

Very soon the great tributaries begin to reach the Mississippi: the Minnesota, or Cloudy Water, ferruginous in fact, whose junction with the Mississippi certain Indian tribes consider as the centre of the earth; the Saint Croix; the Wisconsin, or the Smoky, the Brown, which, like the Minnesota, has its waves stained with iron; the Des Moines; the Illinois, which was perhaps in ancient times the principal stream, when the Niagara had not yet cut its channel, and when the Great Lakes discharged their waters toward the Mississippi. At length, above Saint Louis the Missouri is encountered.

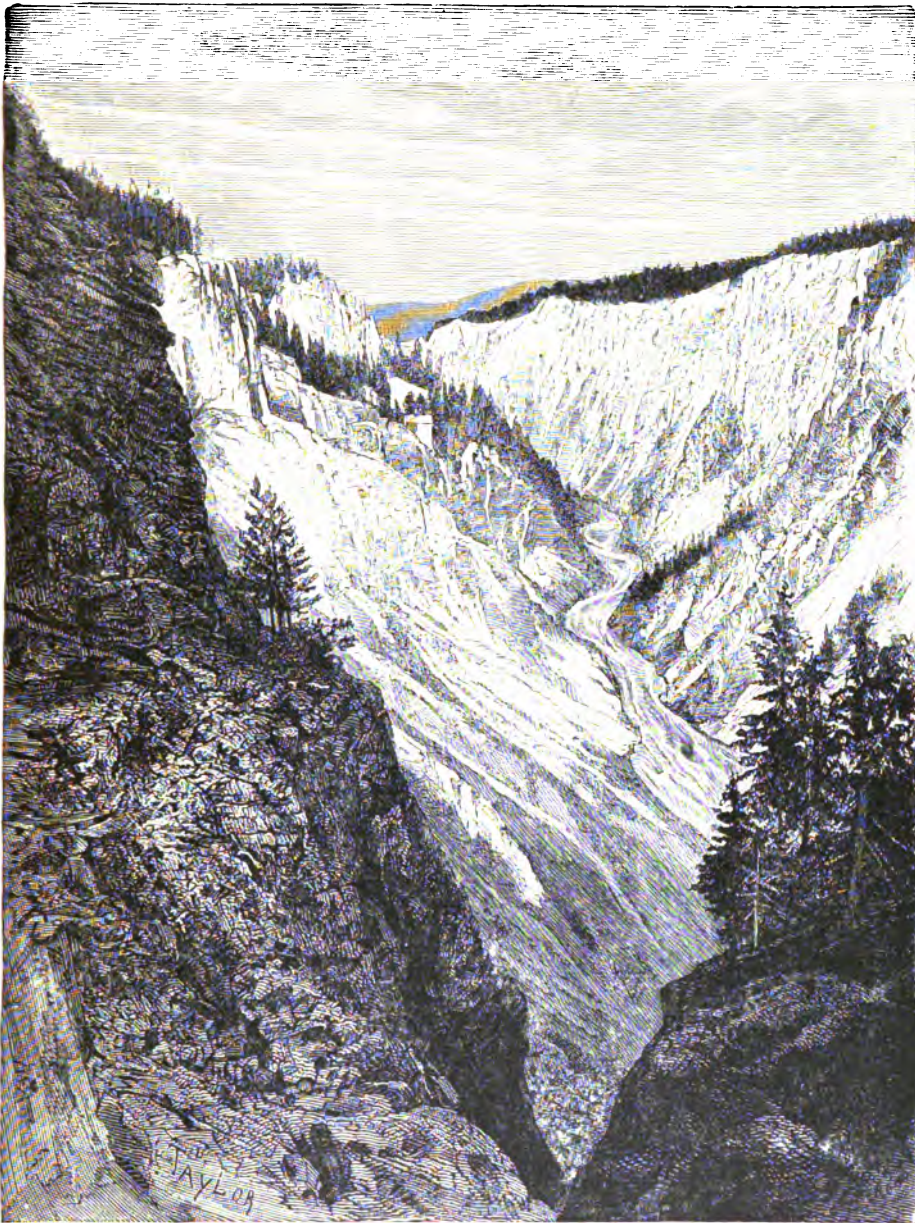
The Missouri or "Mud River," this capricious current which is eroding its banks and devouring its islands, which untiringly excavates, and fills up, and levels, this huge miry stream, does not rise like the Mississippi in a lake country; it is formed of three torrents from the Rockies, namely, the Jefferson, the Madison, and the Gallatin. A cañon 1300 feet deep, and 16 miles of rapids and falls, which lower the bed 360 feet, conduct it from the mountains to the lowlands where in former times it opened its vast bosom to naught but an occasional birch-bark canoe paddled by a Red-skin. The steamboats that speed over its surface to-day are floating palaces.

The Missouri receives some very long rivers, but these have a much smaller volume, however, from an equal surface, than the tributaries of the Mississippi, for far more rain falls on the latter than on the former. The volume of the two streams is not proportional to the area drained; from the 169,000 square miles drained by the upper Mississippi an average of nearly 105,000 cubic feet of water per second is obtained, while the Missouri takes less than 120,000 cubic feet from fully 518,000 square miles. The largest affluents of the Missouri, bordered like itself with walnuts, maples, oaks, and alders, are the Yellowstone, the very broad and shallow Nebraska or Platte, and the Kansas. Two of these, the Nebraska and the Kansas, like the Missouri, the Mississippi, the Ohio, and still others, give their names to States of the Union. As for the Yellowstone, such are the marvels of its upper basin, — its grand mountain scenery, its charming lakes, its hot springs, its geysers, its cañons, cut through scoræ and basalt to a depth of 3000 feet, its cataract of 140 feet followed by a leap of 397, — that Congress has set apart the entire region as a "public park for the benefit and enjoyment of the people."

It is in view of the Ozark Mountains, haughty rather than lofty in their isolation in the vast plain, that the Missouri joins the Mississippi, or rather that it precipitates

¹ With the neighboring rapids, the river descends here 70 feet.

itself upon the green, transparent waters of the latter, drives them back, and penetrates them. The Mississippi, stirred from its indolence and transformed into a swift



A VIEW IN THE GREAT CAÑON OF THE YELLOWSTONE.

stream, continues to flow due south, through a broad valley. It passes St. Louis, a city for which a splendid future is predicted, then cliffs 300 feet in height rise along both banks. There was a time when these rocks, belonging to the Ozark Moun-

tains, had not yet been cut through by the river, but formed a dike, from the crest of which leaped a cataract mightier than Niagara itself; forced back by this dam, the waters spread out in an immense lake communicating with Canada's fresh sea, and perhaps with Lake Winnipeg, which was then a cold fresh Caspian. It is below this cut that the Ohio pours its tribute into the mighty current. Colossal though the Mississippi be, its average flow is considerably inferior to that of the Argentine Plata, the Chinese Yangtze' kiang, and it is far below that of the African Congo, and of the South American Amazon. After all its affluents have been received, the Mississippi carries a mean of 675,000 cubic feet per second, or a fourth the mean of the Amazon; at low water the average is only 220,000 cubic feet, or about one-third that of the Brazilian stream in the corresponding season; in the great floods, the Mississippi flows with a volume of 1,400,000 to 1,500,000 cubic feet per second, a sixth of the *enchente* of the Amazon.

Glutted with alluvia, the tawny sea sweeps southward, with a breadth of 6000 to 7500 feet, and a depth of 20, 50, 75, or 125 feet, or even 230 at the foot of Grand Gulf Hill; it deposits or disperses islands, it eats away its banks, and wherever its movements are not obstructed by levees it pierces new channels through its alluvia. The shores are flat and bordered with grass lands, swamps, and forests. Hills are rare, but the stream occasionally washes bluffs on its left bank, never on its right, and from the summit of these elevations one can look off over the great river and the great valley.

The levees of the Mississippi, a work of the most imposing character, accompany the stream from Cape Girardeau, above the mouth of the Ohio, to a point below New Orleans. The length of this double line and of the secondary dikes is estimated at 2500 miles. Like all the other walls of earth which man has opposed to the fury of the waters, these are not always a safeguard to the plain whose defence is confided to them; when they burst, the Mississippi rushes madly over the adjacent country, which may be called a Holland in its alluvia, its flatness, and in the omnipotence and omnipresence of the water; but in this semi-tropical land swarming with negroes, we do not find the perfect order and regularity that is seen in the Netherlands, — meadows alive with the finest herds, countless canals, roads cared for like park avenues, little towns shining with neatness, monumental cities, and spots consecrated by historic memories twenty centuries old. And the polders of Holland are also wanting along the Louisiana lakes and the ocean gulfs.

The last of the Mississippi bluffs is at Baton Rouge, the humble capital of Louisiana. At New Orleans the stream is scarcely 1100 yards broad, with a depth of 130 feet. The beautiful Crescent City dips upon one side in the river, on the other in Lake Pontchartrain, which opens into the Gulf of Mexico; but, instead of reaching the sea by the short path through this lake, the Mississippi flows on for 60 miles between alluvial banks, as far as the Head of the Passes: there it divides and the waters enter the ocean through five arms which are separated from the Gulf by slender levees of rush-grown mud. Then the rushes disappear, as the wet earth is no longer sufficiently solid to form a sod; little by little the levees are lost in the thin mire which moves to the south-east, south, and south-west, and, continually diluting more and more, passes slowly from the dirty yellow of a turbid stream to the glaucous transparency of the seas. The Mississippi is no more, — but its alluvia are toiling in the deep to enlarge the territory of the United States. Every second 200 cubic feet of earth and detritus wrested from 1,244,000 square miles of surface are brought down

to the mouth of the stream. The delta makes a yearly gain of from 250 to 350 feet on the waves. The navigation of the Passes is obstructed to a certain extent by shifting banks of sand; to obviate this difficulty a system of jetties has been constructed in South Pass, calculated to maintain a channel 30 feet deep.

The last large affluent of the Mississippi, the Red River of the South, formerly reached the sea independently of the mighty stream. This current is famous for its Great Raft, an obstruction of drift-wood, which by degrees has crept up to a point 400 miles above the mouth, at the rate of 1 or 2 miles per year. In measure as the raft is destroyed down-stream it forms up-stream; after twenty-two years of labor



YELLOWSTONE LAKE.

man has grown weary of demolishing below what nature builds above, and the raft has been left to itself to form a bog in the future.

Barren Plains. — The Rocky Mountains. — Ascending the Red River of the South, the Arkansas (1514 miles long), and the tributaries to the right bank of the Mississippi, we see, at long distances from the Mississippi, wide level stretches, barren for lack of rain, and furrowed by broad river-beds; but the rivers are impoverished by the aridity of the climate. The Canadian, the chief affluent of the Arkansas, is sometimes wholly dry, and it is said that there are large districts here where the rainfall of the entire year scarcely reaches two inches (?). All these desert or half-desert tracts, with little rain, little vegetation, and no trees, might be named *Mauvaises Terres*, or Bad Lands, in imitation of the French Canadians who gave this title to a region included between the Missouri and the Rockies.

• In the upper courses of the long rivers which we are ascending, the surface is rugged; at length we reach the Rocky Mountains, where are the sources of the thousands of swift torrents which, fleeing toward the east, are finally united into one murky stream and pass before the quays of the superb Crescent City. Others, limit-

ing their career to the plateaus where they originate, either dry up or end in lakes that have no outlet. Others still descend the western slope toward the Pacific by the mighty Columbia, the Californian streams, and the Colorado.

The Rockies do not exhibit the characteristics of a normal mountain-chain, like the Caucasus and the Pyrenees, for example. Composed within the territory of the United States of mountain knots, groups, and ranges which are at times remote from one another, then approach, intersect, and interlock, they support on their shoulders immense table-lands; this entire region is cold, rough, sterile, and naked, except in the glens and valleys where there is running water, or on certain grass-covered, forest-clad mountains. The loftier these mountains are, — and there are some over 14,000 feet high, notably in Colorado, — the more vapors they concentrate and the more rain they attract; and the greater the amount of water which they receive, the more they send down into the valleys and plains. The result is that the value of the plateaus is proportionate to their altitude: below 3000 feet, the desert rules, a perfect Sahara, known under various local names; between 3000 and 5000 or 5500 feet is a half desert, on which no vigorous vegetation grows and where very few trees and even few shrubs defy the aridity of the soil and of the heavens; above 5500, every valley, every ravine, and every plain receives some creative rill from the mountain. The Rockies abound in gold and silver and metals of every kind. This is *par excellence* a mineral and mining section.

The Great Basin. — Deserts of the South. — Among the plateaus of the Rockies, none is more celebrated than that of Utah. This high table-land, which the Mormons name Deseret, is a desolate region; the soil is clayey and destitute of springs. As the rains are unable to scale the Californian walls, the valleys are sterile unless the waters of the lofty mountains are brought into them in canals. Clumps of mid-summer vegetation, saline expanses, sierras in the distance, a climate which the elevation of the surface rendered harsh and excessive, one vast salt lake, and small brackish lakes, — such was the table-land of Utah before the system of irrigation and cultivation introduced by the Mormons covered it with trees, crops, and grass-lands.

Great Salt Lake, at 4200 feet above the sea, receives the Jordan, a river which rises in Utah Lake, 190 feet higher, and bathes Salt Lake City, a town of 21,000 souls, the capital of the Latter-Day Saints. This Jordan, the Bear, and other tributaries discharge into the lake an average of 500 to 525 cubic feet of water per second, all of which is probably taken up by evaporation, for Great Salt Lake has no visible outlet. This lake is far saltier than the ocean itself. It destroys the fishes brought down to it by the torrents, and the gravity of the water is such that the swimmer can sleep in all security on its bosom. Though formerly much more vast, it still has a circumference of 250 miles; from some undetermined cause it has been increasing in size for the past twenty years, though for a long time before that it had been steadily shrinking. Geese, wild ducks, swans, gulls, pelicans — birds without number enliven its waters. In places it has a depth of 33 feet, with an average of 7 feet.

West of Great Salt Lake, in the State of Nevada, the Humboldt River, 500 miles long, terminates in a lake of the same name, whose floods have been gradually diminishing for centuries. The term Great Basin is applied to all this region, — to the Utah plateau, the Humboldt valley, Pyramid, Winnemucca, Carson, and Walker lakes, Lake Tahoe, 6200 feet above the sea, Lake Mono, at an altitude of 6457 feet, and



IN THE ROCKY MOUNTAINS.

some hundreds of minor depressions, covering all together 280,000 square miles, or more than four times the area of New England. Though in the north the plateaus are 4000, 5000, or 6000 feet above the ocean, the south consists of but slightly elevated plains, and in places these even sink below sea-level. Death Valley, between the Amargosa Mountains on the east and the Panamint Mountains on the west, in its deepest part is 174 feet lower than the Pacific. It is in the south of the Great Basin that the most forbidding deserts occur, such as Death Valley, Mohave, and Colorado. In this last depression, 250 feet below sea-level, water began to appear in the spring of 1891, and an immense shallow sea soon formed. It proved to be an overflow from the Colorado and, owing to the hot, dry climate, may be only temporary.

Colorado. — Arizona. — New Mexico and Texas. — East of the high plateaus of the Great Basin stretches Colorado; east of the southern sahara, on the Mexican frontier, lie Arizona and New Mexico, from which we cross over into Texas.

Colorado is named from its stream, a tributary of the Gulf of California, or, in other words, of the Pacific. This scanty river bears the penalty inflicted by the brazen skies under which it winds through the most imposing gorges in the world; its mean flow is perhaps less than 3500 cubic feet per second, and yet its basin (225,000 sq. m.) is nearly three and a half times the size of New England. The Great Cañon of the Colorado, one of the most wonderful natural objects of North America, is fully 300 miles long; on either hand the cliffs rise to an altitude of 4000, 5000, and even 6000 feet, pressing upon the stream, which often measures less than 100 feet from rock to rock. The average height of the walls is about 3000 feet. In the eastern part of the State, the surface is disposed in a semi-desert plain; in the west, among the lofty mountains, the fresh country, abounding in rivers, offers valleys for tillage and slopes for pasturage; but in Arizona, at the gates of the ancient empire of Montezuma, the sun is more nearly vertical and the water-supply will always be deficient, for, besides being scanty, the rivers are buried in frightful cañons. In New Mexico and Arizona the northern and American aspect is wholly wanting. In Arizona there are ruins of monuments which were raised by the Indians long before the Spanish Conquest, and New Mexico is principally inhabited by people of Spanish speech and of the Roman Catholic faith.

New Mexico pours its streams into the Rio Grande del Norte, a tributary of the Gulf of Mexico. The Rio Grande has cañons like the Colorado, though they are less imposing. This "Grand River of the North" drains but a meagre supply of water from its basin, because the rainfall, which is slight, is all taken up in watering a region where cultivation depends entirely on irrigation. However, though the principal current of the southern Rockies is inferior in volume and breadth, in length it is a half-Mississippi. It measures about 1750 miles, in a basin of 240,000 square miles.

Along more than half its course — starting from the sea — the Rio Grande del Norte separates Mexico from Texas. In the north of the latter State, the Comanche Indians, who refuse to submit to the white usurpers of their horizons, gallop over the Llano Estacado. The Llano is perhaps the most arid spot in the United States east of the Rockies. Scarcely any rain falls on it. Salt lagoons, which have none of the beauty of lakes, no springs, river-beds but no rivers, not a tree, a few bushes, and no inhabitants, — such are some of the characteristics of these steppes situated at an altitude of 1000 to 5000 feet. They owe their name of "Staked Plain" to the posts set up through the wilderness to guide the traveller or the caravan, or, according to another explanation, to the stalks of yucca-plants growing on them.

North and north-east from the mouth of the Rio Grande del Norte, as far as Louisiana, rivers with Castilian names flow into lagoons which are separated from the Gulf by cordons of gravel. Ascending along their banks one makes his way sometimes through plains, sometimes over hills and low mountains, under warm skies favorable to the growth of cotton, sugar-cane, and to the various so-called tropical or semi-tropical productions.

The Pacific Slope: the Columbia or Oregon. — North of Great Salt Lake, north of



THE SHOSHONE FALLS, SNAKE RIVER.

Nevada with its lacustral plateaus and metalliferous mountains, the waters of the streams find their way to the sea: the long Snake River carries them into the beautiful Columbia or Oregon, one of the most majestic rivers in the world; by turn lake or torrent, it flows sometimes mute, sometimes thundering between immense rocks, at the Chutes, the Dalles, and the Cascades, where it pierces the Cascade Range by long gorges, with walls more than 3000 feet high: on the south rises Mount Hood (11,225 feet); on the north, Mount Saint Helen's (9751 feet); these two old snow-topped volcanoes, both towering proudly from their pedestal, without spur or sup-

port, are apparently extinct. Mount Rainier (14,444 feet), north of Saint Helen's, is covered with perpetual ice.

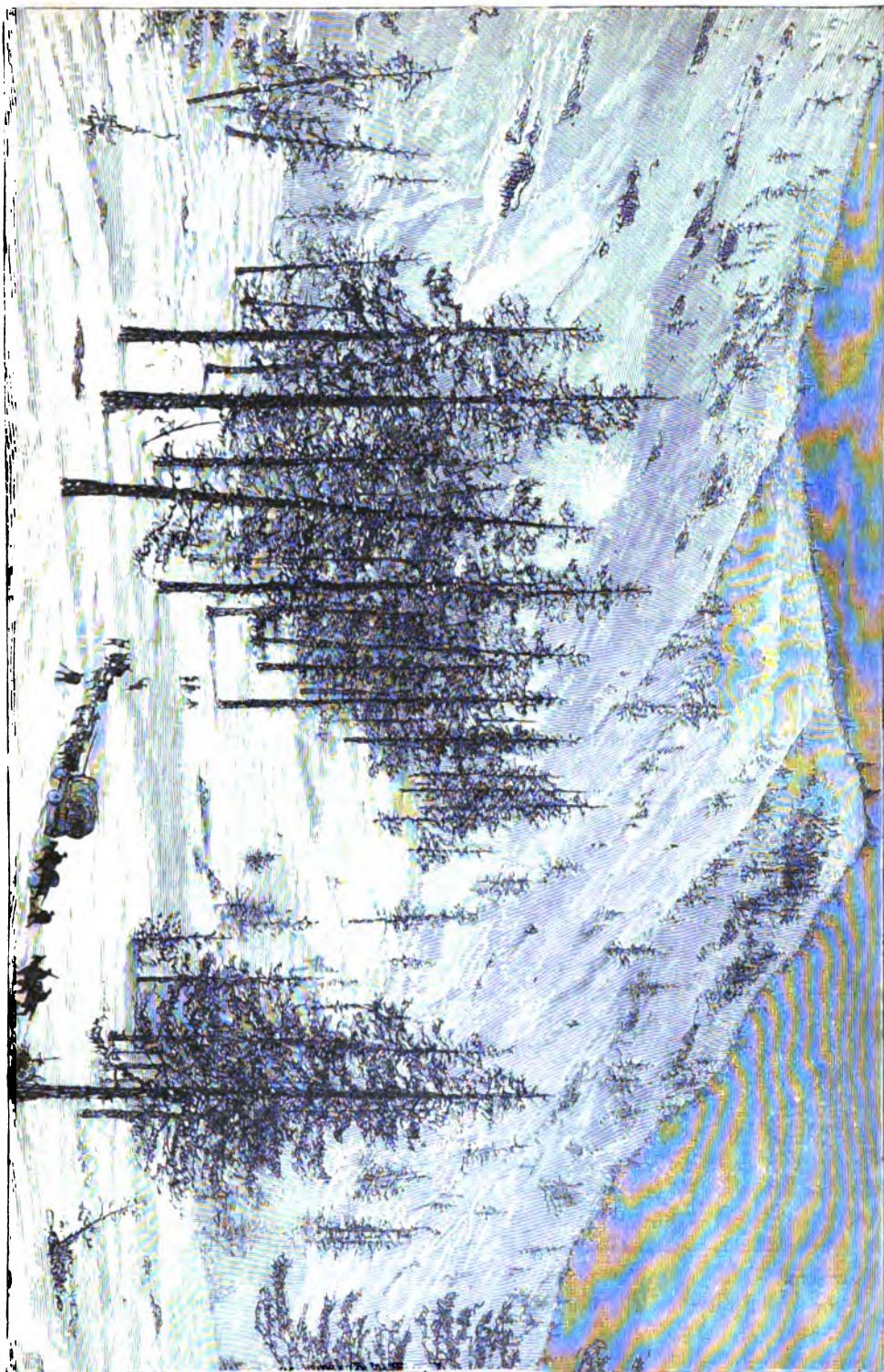
The smaller of the two branches which form the limpid Columbia (from 1100 to 1300 yards broad), and the one which gives its name to the stream, rises in the Dominion of Canada, where it expands more than once into an elongated lake. The true parent branch is the Snake, also called the Lewis; it has its sources among the boiling springs and spouting fountains of the Yellowstone Park, and it flows, like its affluents, by leaps and cataracts, in cañons and out of cañons, through a chaos of mountains, nearly all of which are of volcanic origin. The Columbia, this superb stream of 1250 miles, is shared by British Columbia, Washington Territory, Oregon, Idaho, and Wyoming; its basin is estimated at 298,000 square miles. And these 298,000 square miles are rich with mines of every metal, with tufted vegetation, and forests of splendid, perhaps unrivalled growth, composed of yellow pines, cedars, and—to a lesser extent—of oaks and beeches. The magnificence of these woods is due to the superabundance of rain in the north-west of the United States, especially on the western slope of the Cascade Range: so much water falls in the lower course of the Columbia, in the western part of Washington and Oregon, that popular irony has given the name of Webfeet to the dwellers along the Pacific shores.

The Sierra Nevada. — California. — West of Nevada, we ascend the rugged slopes of the Sierra Nevada range, which shuts off the Pacific horizons from the Great Basin. The rains almost never scale these summits, to the great disadvantage of the vast plateaus lying to the eastward; the clouds burst on the west of the ridge which bars their route to the east. With the mighty swell of the surface everywhere rising in mountainous waves, the abundance or at least the sufficiency of the rainfall makes the beauty of northern California. The great mass of the sierras prevents the moisture of the ocean from being dissipated at a distance, and it all falls in front of the Nevada peaks; between these peaks and the briny floods toward which the swift torrents speed, we see a maze of mountains, gorges, and lakes, and woods where the mightiest firs of the world shoot up to the height of 250 and sometimes 400 feet. California is the gem of the Union and one of the most beautiful regions of earth, especially in the valley where the Yosemite dashes in cataracts down precipices 300 to 1200 and even 2500 feet high. The palm of wealth was awarded for a score of years to the gold mines which have made the name of California proverbial the world over.

The passes of the Sierra Nevada are on the same level with the ports of the Pyrenees, but its peaks are much loftier than those of the Hispano-French mountains. Mount Whitney (14,898 feet) rises somewhat higher than the culminating summits thus far measured in the Rockies of the United States, which range between 14,000 and 14,375 feet. Near the Oregon frontier the cone of Shasta's extinct volcano towers to an altitude of 14,442 feet; Lassen's Butte (10,577 feet), another old volcano, is recognizable from a distance by the redness of its rocks.

The rainy districts of California do not extend along its entire seaboard of 750 miles, nor over all its 158,000 square miles of area. Nearly half of this surface is included in a dry region along shore and, behind the southern coast mountains, in sterile plains that stretch away to the gloomy cañon of the Colorado.

Alaska. — The Aleutian Islands. — The United States own about 530,000 square miles of almost worthless land, at the extreme north-west of the continent, north of the 55th parallel and in great part north of the 60th. Owing to its situation on the Pacific, which is warmed even so far north by the tepid Kuro Shiwo, this vast tract,



IN THE SIERRA NEVADA.

the most unpromising in the Union, is habitable — in spite of its high latitude — along the coast, in the islands, and in the lower valleys of certain streams. Lofty mountains send down to the very ocean's edge ice accumulations which are undergoing a slow process of diminution, such as the glacier of Mount Fairweather (15,500 feet) and that of Mount Saint Elias (variously estimated from 12,661 to 19,500).

The peaks and glaciers are imposing, but the silvery tops of the mountains are rarely visible, for it rains persistently along the cloud-covered, sunless Alaskan seaboard. The temperature is not wholly Arctic except in the north of the peninsula, in the regions where the Pacific becomes Behring Sea; however, at Sitka, in the south, on the island of Baranoff, the temperature falls to 18° F. below zero, and it hardly rises to 68° above. In the interior of the country, it is warmer in summer, but in the heart of winter the temperature sometimes sinks to 70° F. below zero.

A majestic stream, the Yukon, flows through this land of long winters and white solitudes. It is navigable for 1800 miles (a distance greater than the entire length of the Danube), and has possibly as large a volume as the Mississippi itself. All of its upper course is in the Dominion of Canada where it rises; on United States territory it broadens out in places to 15 or 20 miles — a lake rather than a river.

The fisheries of the coast and of the streams, the mines of the mountains, the firs, pines, cedars, birches, poplars, willows, and alders of the valleys will prevent Alaska from remaining a complete desert. At present about 30,000 inhabitants struggle here against the wretched conditions of their life; these are Indians, Eskimos, Aleuts, Russians, Russian and native half-breeds, and a very few Americans.

The United States received from Russia, along with Alaska, the Aleutian Islands, which all together, in their arc of 1000 miles, may contain 6500 square miles. Exclusive of reefs, islets, and rocks, they number about 150; they separate Behring Sea on the north from the Pacific on the south. There are about thirty volcanoes in the archipelago, the summits of a chain, in part concealed beneath the briny waves, and stretching from the slender peninsula in which Alaska terminates nearly to the peninsula of Kamchatka, or, in other words, from America to Asia. As the sea which bathes them, between the 51st and 55th or 56th parallels of latitude is not wholly without warmth, freezing is rare, but rain is more abundant than sunlight, and, like the American promontory which overlooks them, they are visited during entire seasons by a sort of deluge; grain never ripens on them, and the trees, — aspens, willows, firs, and oaks, — are scattered and stunted, but the grass is fine and thick. Unimak and Unalaska, the largest of the group, lie at the eastern extremity of the chain near America; Shishaldin, a volcanic cone on Unimak, rises to the height of 9000 feet.

The Aleuts, originally Eskimos or Kamchatkans, live by fishing, hunting the seal, and from time to time capturing a whale. They are small but thick-set and robust; they are most skilled canoeists, and they toil untiringly during the long days of the fishing season. They pass the winter in species of burrows, where the families are crowded together promiscuously. They are said to be gentle in disposition and truthful. Their numbers have greatly decreased since the first appearance of the Russians (1745), who settled among them as fishermen, merchants, and fur-traders. From 10,000 they have diminished to 2100, and they are insensibly giving place to half-breed families of Russian speech. This long train of islands separated by broad passes possesses as yet nothing of the Anglo-Saxon element.

Organization and Government. — Beginning its existence with thirteen loosely con-

federated members, the Republic now has forty-four, besides five subordinate organized bodies (called Territories) with local self-government but not taking part in the national administration, and two anomalous possessions (the Indian Territory and the District of Columbia), the whole united in nationality and fused and firmly rooted in one governmental system. The Civil War of 1861-5 established the principle that the central government is an entity independent of its component States. It has a written Constitution, which can only be altered by the votes of three-fourths of the States on amendments submitted to them by Congress, and which divides the national government among three departments, — executive, legislative, and judicial.

The actual ruling power in the country is the supreme judiciary, as it construes the Constitution and can declare invalid any act even of Congress which is inconsistent with that instrument. All United States judges hold office till 70, and are appointed by the President and confirmed by the Senate, but their numbers fixed by Congress, — the latter a power capable of formidable use, similar to the creation of peers by the English sovereigns. The judicial system comprises a Supreme Court, at present consisting of a chief justice (differing only in title and a trifle more salary, not in powers, from his fellows) and eight associate justices, convening annually in Washington; nine circuit courts of appeal; circuit courts held by the supreme judges, one to each circuit, which also has a separate circuit judge acting with or without the other as may be; district courts each with its judge; and a Court of Claims sitting in Washington.

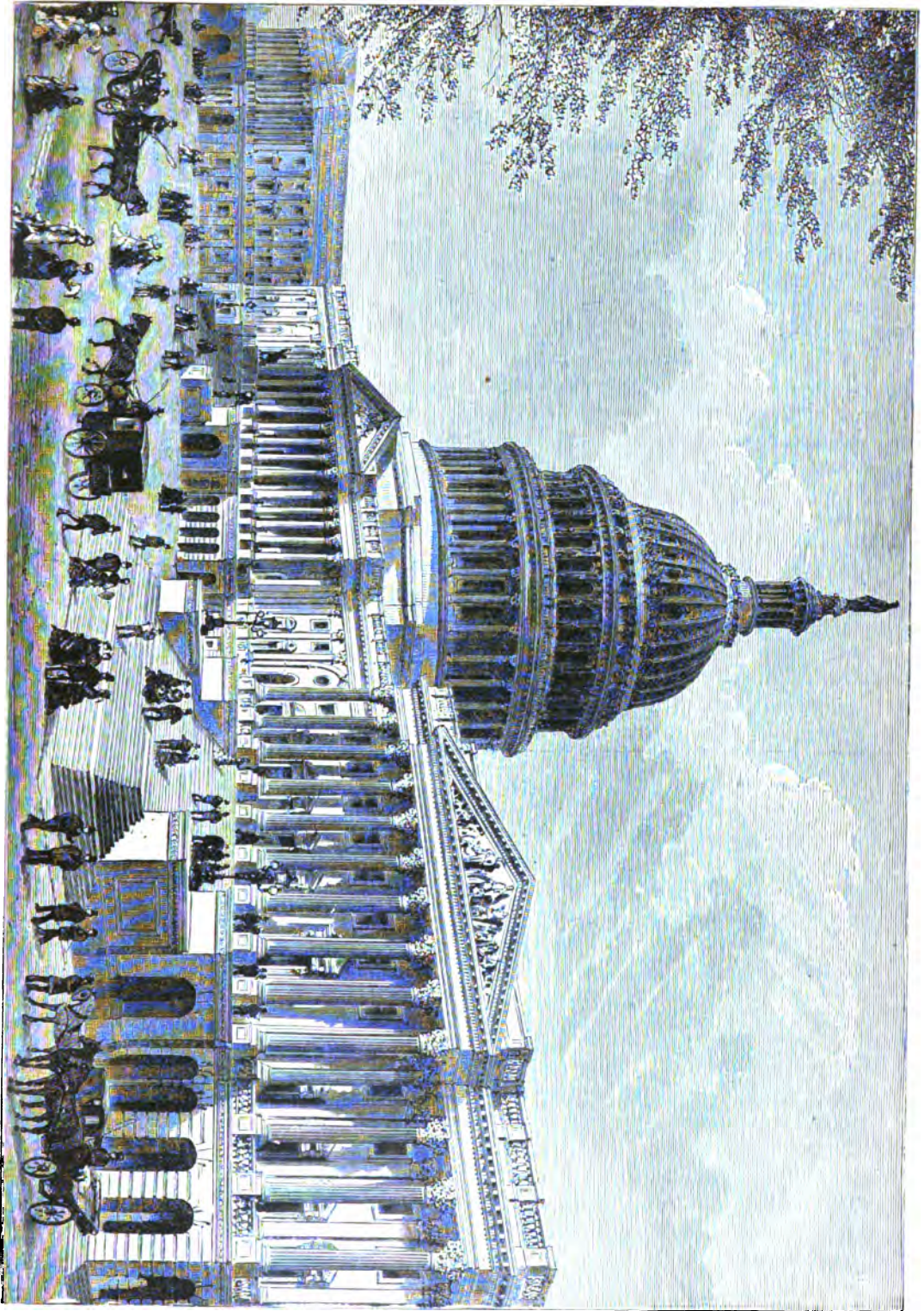
The legislative department is Congress, of two Houses, the Senate and the House of Representatives. The former represents the States as equal corporate existences, and so consists of two members from each State, large or small, now numbering 88; but it was also modelled on the English House of Peers, and designed as an "upper house," a superior checking body to the House of Representatives, and so the terms are much longer (six years, one-third falling vacant every two years), the age limit is higher, the members are not chosen by direct popular election but by the State Legislatures, and more qualifications are imposed on eligibility. This body confirms all treaties and all the President's appointees, and is the only court before which the President or Vice-President can be tried, and then only by impeachment proceedings presented by the House of Representatives. The latter now consists of 356 members, chosen by popular election, apportioned among the States on the basis of population, with a re-apportionment at each decennial census, and invariably increased each decade because the stationary States do not like to have the number of their Representatives lessened. No State can have less than one, but a State may have one member in the lower house and two in the upper; and the largest number in both now held by any one State is 34, in New York. The terms are two years; the Representatives are elected by legally constituted districts, and each must, by usage, live in the district for which he is elected.

The executive department is headed by a President and Vice-President, elected every four years. They are not chosen by direct popular vote, but by a body called the "electoral college," itself chosen by popular vote, whose membership equals the number of Senators and Representatives combined, but is elected by States, not districts; and the members from each State meet separately and ballot for the officers, and transmit their vote to the president of the Senate, who counts and announces it. The original theory was that the College was to be a real deliberative body voting independently; but it became many years ago a mere formality, the members being

selected on a virtual pledge of voting for candidates previously nominated by a national representative convention of their party, and their functions could be perfectly well performed by automata: Its Statewise action, however, is a great convenience for ascertaining the result of the election speedily, and probably a great preventive of fraud when the popular vote is close and a few thousand votes in remote lawless States might determine the result. There is no legal limitation on the number of terms for which a President may be re-elected. He has an almost unrestricted power of appointment and removal of national officials only excelled by absolute despotisms; the former requires the consent of the Senate, the latter is absolute. This power covers directly or indirectly all but a few thousand of over 125,000 persons, the civil service of the nation. He can veto all acts of Congress, but a two-thirds vote will pass them over the veto. He is commander-in-chief of the military and naval forces of the Republic, and he has also power to make treaties subject to the consent of the Senate. He appoints with Senatorial confirmation, and dismisses at will, a Cabinet who are the heads of the executive departments constituted by Congress, but are responsible to nobody but himself; they have no seats in Congress, and cannot address that body nor transmit intelligence to it except through communications called for by it. At present the Cabinet consists of the Secretaries of State, Treasury, War, Navy, and Interior, the Attorney-General, and the Postmaster-General. The Vice-President has no executive duties, and is simply a substitute in case of the death, resignation, or removal by impeachment of the President; he is *ex officio* president of the Senate when present, but he need not be present, and the Senate has always its own president *pro tempore*.

The powers of the general government are construed to be only those expressly stated in the Constitution, all others remaining to the States, which have simply ceded certain of their independent powers; but no such exact boundary can be maintained, for the provinces of the two overlap at many points. As a matter of fact, the central power has steadily encroached on the functions of the States, and does so with accelerating rapidity. The Supreme Court is the deciding power on this point, and cannot but lean to the side of its client the nation; and the arbitration of the sword having been tried and having resulted in favor of the latter also, the decisions of the court are clothed with irresistible power. In like manner, the boundaries of the executive, legislative, and judicial departments are much less distinct in fact than theory, and the indications point to the strengthening of the legislative at the expense of both the others.

The State governments are organized in substantially the same way as the national government: each of them has a governor and lieutenant-governor, a legislature of two houses chosen by popular election and the upper house less in number than the lower, and a State judiciary, sometimes appointive and sometimes elective. Each State is subdivided into counties (in Louisiana called parishes), which outside of New England are the true constituent units of the State government, and the county seat a centre of gravitation for the county; in New England the township is the unit, the county being an artificial structure retained for a few convenient purposes, — having a court, a sheriff, a jail, and a board of road commissioners, and usually an almshouse. In the Northern States the entire county is divided into townships, there being no county land which does not belong to some township; in the South and the newer Western States, townships are formed from county territory according to necessities of settlement, and may or may not be conterminous with any others.



THE CAPITOL AT WASHINGTON.

Territories are embryo States, with the same organization as States ; but the governor, the judiciary, and the principal administrative officers are appointed by the President. The legislature is elective as in the States. Each Territory sends an elected delegate to Congress, who, however, has no vote in that body. Its admission as a State is decided by Congress, and is supposably consummated when it has sufficient population to be entitled to a Representative in Congress according to the unit fixed by the last census (at present, 170,000) ; but a few States have been admitted with much less, and no law compels admission except in the discretion of Congress. The Indian Territory is not a Territory in this sense, but a collection of Indian reservations without unity ; and the District of Columbia is immediate federal property governed by appointed commissioners.

Origin and History. — The character of the English colonization, and the reasons for its immense development in strength beyond the others in America, have been given in the general description of America. By successive grants and charters (often conflicting with French claims and producing wars which desolated the colonies with murderous Indian raids incited by the French, and not unfrequently conflicting with one another and creating endless intercolonial feuds and irreconcilable boundaries), the English territory had in the eighteenth century definitely crystallized into thirteen colonial dependencies, varying from a size greater than England to that of an English county, and roughly coincident with the eastern Appalachian-Alleghany slope except in New York and Pennsylvania, which had extended to the Great Lakes ; though the other colonies claimed to extend westward indefinitely. On the north they extended to Acadia, on the south to Spanish Florida, being barred from the Gulf by a narrow strip. Their charters varied greatly in terms, but the net product to England was about the same from all, — a civil service on which to quarter aristocratic paupers, and a source of men and material for its wars with France ; and as the colonies derived only injury from the connection, — as their business development was shackled for the benefit of (though it did not benefit) the mother country, and the danger from French and Indian ravages from which that power protected them would scarcely have existed at all but for its European diplomacy, — this was quite return enough. It must be remembered that England's abstinence from totally annihilating the colonies' trade and production did not proceed in the least from superior enlightenment, but solely from domestic and foreign troubles which drained its strength and diverted its attention : its conviction was that of all countries then, that everything grown or manufactured in the colonies, and all trade carried on by them with other powers, was so much subtracted from the revenues of English producers, traders, or carriers ; the Parliament in 1713 resolved that manufacturing in the colonies was derogatory to English interests, and the furious opposition to receiving a *gift* of fat cattle from Ireland after the great plague of 1666, as a disguised attempt to ruin English stock-raising, shows the character of the economic doctrines of the day. But distance and the foreign wars and dynastic weakness of England enabled the colonies to evade the imperial laws, and to build up a nearly unshackled trade by a gigantic system of smuggling ; the danger from the French power forbade open defiance of the laws, and the colonies felt much warmer loyalty to England than there was any rational ground for.

The final destruction of the French power precipitated the inevitable conflict almost at once, by untying the hands of both parties : it set free the forces and the attention of England to concentrate on its recalcitrant colonies, and freed the latter

from the terror of a savage enemy backed by a cunning and unscrupulous civilized power; so that England, by gaining Canada, lost the United States, — an indifferent bargain. Moreover, England felt the burdens of the war severely, and was determined the colonies should bear part of the expense; the latter did not object,



SEBASTIAN CABOT.¹

but stubbornly refused to do it through the machinery of a tax on trade, the underlying object of which was to destroy their trade. The new taxes were preceded, in 1761, by a great increase in the vigilance and severity with which the revenue laws were enforced: the West India trade, which made half the wealth of the northern

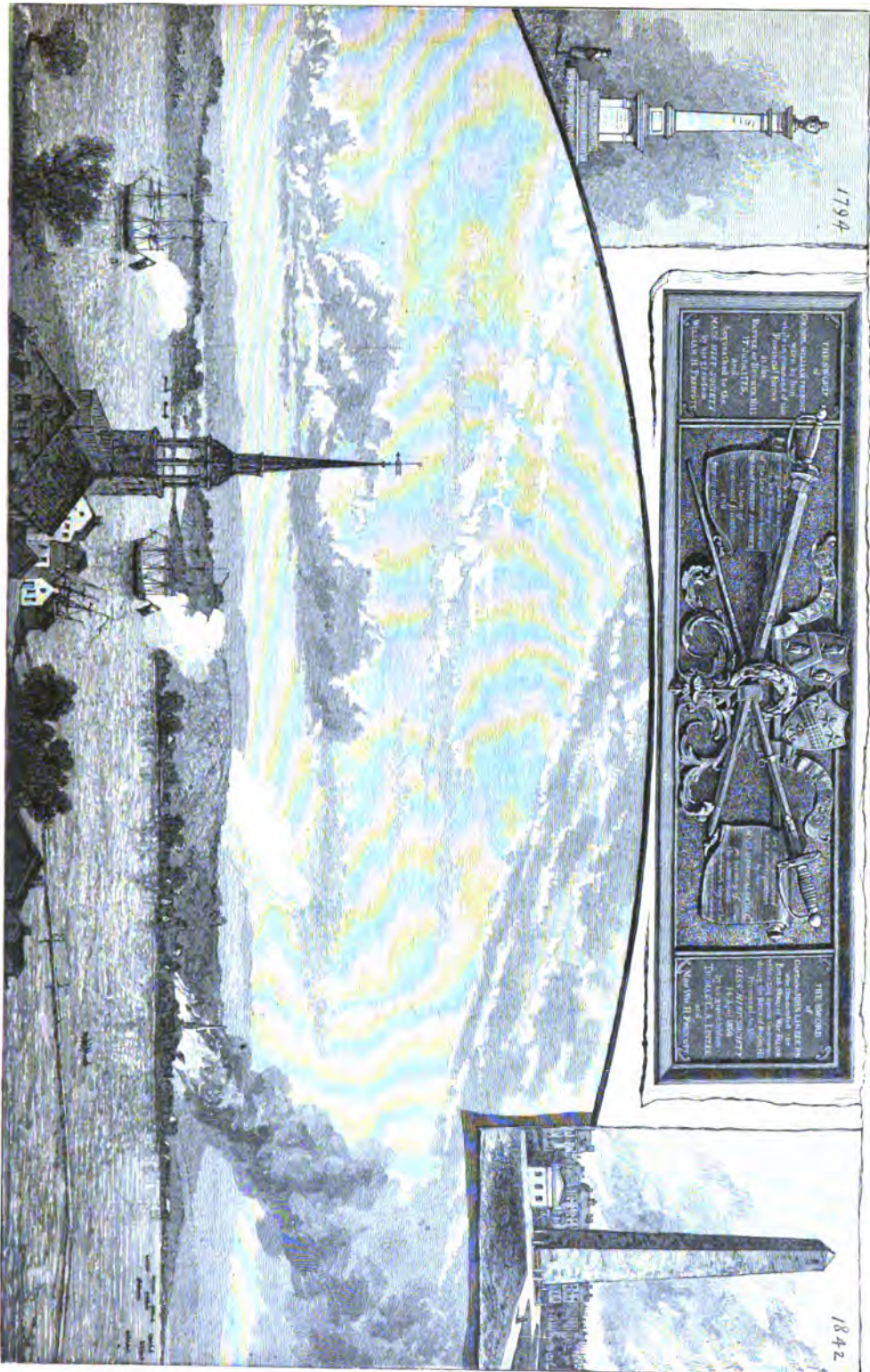
¹ Sebastian Cabot, an English navigator of Venetian descent, in the service of Henry VII., was one of the most important and famous of the discoverers and explorers in America.

colonies, was destroyed, the Maine fishermen and lumbermen found their market taken away and the woods snatched from their axes by the royal forestry laws, and industrial ruin menaced all; the fate of stagnant Canada or enslaved Spanish America was preparing for them, through awful distress and prolonged agonies of decay, a parallel to those of Ireland. They found in 1765, when a "Stamp Act" was passed levying duties by stamps on various colonial articles, a very good principle on which to base resistance, that of "no taxation without representation." The Act was furiously resisted: "Sons of Liberty" formed bands in the towns, people pledged themselves not to use the taxed articles, the stamps were destroyed or sent back to England, and nine colonies sent delegates to a Congress at New York to frame a declaration of grievances and a bill of rights. The law was repealed in 1766; but the next year it was renewed, this time confined to glass, paper, printers' colors, and tea, — the last-named having the double object of stopping colonial tea-trade with Spain and building up the East India Company.

From this time on the colonies were in an uproar over the taxes and trade-laws; fully resolved to fight rather than submit to the industrial annihilation the mother-country intended for them, but not yet (except a few far-sighted leaders) dreaming of separation. Unfortunately, they were divided among themselves both as to the necessity and the possibility of resistance. The older men, and those most comfortably placed or in business not greatly interfered with by the laws, naturally took an optimistic view of affairs; the younger, the crippled or ruined traders or manufacturers, and able ambitious men who did not enjoy seeing the avenues of public life crowded with imported "younger sons" who could not make a living at home, were hot for resistance: but many who thought the latter just also thought it mad. The new taxes were fought even more fiercely than the old, for the illegal commerce, the colonies' life-blood, was still cut off, and ruin came nearer. Boston was considered the centre of resistance, and royal troops were brought on to overawe it, with the result of a collision in 1770 (the "Boston Massacre") in which three citizens were killed. But Narragansett Bay was an even greater theatre of insurrection: two revenue vessels were burned by mobs from Newport and Providence, another fired into, another's boat was burned.

In 1773 the taxes were abolished except three pence a pound on tea; the latter was retained "to keep up the principle of taxing," George III. said, and also to enrich the East India Company in the great struggle for India then going on with France. But the backbone of the resistance lay neither in the fact of a microscopic tax nor in an abstract principle, — it lay in the cutters that searched every vessel going into or out of Boston, Salem, Providence, or Newport; and so the non-importation agreements were continued against tea as fiercely as ever, the people who would not join them were shunned and sometimes ill-treated, some of the tea was shipped back to England, and finally, on the evening of Dec. 16, 1773, a mob boarded a tea-ship which had just arrived in Boston harbor with 348 chests of it and emptied it all into the sea. Parliament retaliated by closing the port of Boston to commerce; but the other colonies made common cause with Massachusetts, and the city was filled with contributions of grain and cattle.

Then a fleet and army were sent over to quell the colonies; and the latter armed and drilled militia for resistance on a minute's notice, thence called "minute-men." The first collision was certain to fire the whole train; it came when a detachment of British troops from Boston tried to destroy an arsenal at Concord, 24 miles off, and



THE BATTLE OF BUNKER HILL AND BURNING OF CHARLESTOWN.

was itself half destroyed by the militia on its retreat through Lexington and West Cambridge. The memorable engagement of Bunker Hill followed; the whole country was aroused; in a few days Boston was besieged by 20,000 men; the colonies rose in united revolt, a Congress met at Philadelphia and provided for an army with George Washington at its head, the northern border fortresses of Crown Point and Ticonderoga were surprised and captured, and an earthwork thrown up by the provincials close to Boston cost such fearful sacrifice in its capture that the battle had all the effect of a victory. The British could not stir out of Boston, and had to evacuate it in the spring; and they never again held a rod of New England soil for more than a day or two. An expedition in the winter to rouse Canada came to utter ruin, getting no help from the inhabitants; but a formal proclamation of independence was made early in July,¹ 1776, the thirteen colonies — Massachusetts, New Hampshire, Connecticut, Rhode Island, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, North Carolina, South Carolina, Georgia — constituting themselves a single united power. It took more than five years of hard fighting to ratify the instrument, and success was only effected by the help of France; the middle and southern colonies were overrun, and Congress driven from place to place by the British armies: but when seemingly on the brink of entire failure, the main southern British corps was caught in a most foolish trap by the French fleet and the American army, and compelled to surrender (Oct. 19, 1781). There were only 7000, and little more than 100,000 troops were ever sent over, many of them hired Germans; but such a loss was ruinous to a power fighting in a semi-wilderness 3000 miles from home, and at war with France and Holland at the same time. The English ministry were sick of the war and believed it unjust, and only the king's obstinacy had prolonged it. Independence was acknowledged and the country evacuated in 1783; and by the treaty, the United States extended to the Mississippi, and from the Great Lakes to 31° S. and the southern boundary of Georgia, covering an area of about 820,000 square miles, of which not over 250,000 was actually occupied.

The confederation which carried on the war was of the loosest nature, consisting merely of a league of independent communities which dealt with each other and the central power only as units; the latter could not reach individuals or collect taxes, but made requisitions for lump sums on the States, which paid what they chose of their quotas; if a State was contumacious or dilatory, obedience could only be compelled by making war upon it. This system broke down utterly as soon as the war pressure was removed, and the next few years are a story of threatened anarchy, bankruptcy, and the derision and insults of the world; the European powers confidently expected to divide up the country among themselves in a short time. The acts of Congress, to which the States paid no attention, were ignored throughout the land. Yet even thus, so jealous were the States of imposing upon themselves a new domination after just throwing off one exercised for their ruin, that the present Constitution, adopted in 1788, had to be framed by a convention called under false pretences, and it was ratified with the greatest reluctance and only because no State dared to be left out of the new Union, exposed to its hostility and debarred from its trade. Its effect was magical, however: it dealt with individuals, not States, and collected its taxes directly, its executives were men of matchless ability, and the new vigor at once displayed put a stop to all thoughts of disintegration. Not only the present greatness, but the present existence of the nation as a unit, is due to its adoption.

¹ The people celebrate the 4th, but there is a dreary literature of dispute as to the exact date.

Of the history and development of the country since then, only the barest outline can be given. The States without defined western boundaries ceded to the general government their claims to land west of about their present limits; and up to 1803, the four new States of Vermont, Ohio, Kentucky, and Tennessee had been formed from such lands. In that year was made the most enormous and valuable of its accessions of territory, the purchase of "Louisiana" from Napoleon for \$15,000,000; it included nearly the whole western Mississippi Valley, above the 42d parallel, extended to the Pacific Ocean, and as rectified by the Ashburton treaty of 1842, covered about 1,165,000 square miles. This bargain was due to Napoleon's want of money and his desire to strengthen an enemy of England; but the grand European duel then in mid-action held also many years of trouble and loss for the country. Both belligerents claimed the right to search neutral vessels for contraband goods, and each made all trade with the other contraband; and under this contention American vessels were plundered wholesale by both parties, and American seamen impressed by thousands into the British service under the pretext that they were runaway British subjects. Political factions, and the unwillingness of the Federalist party (which was a minority in numbers, but a great majority in ability, wealth, and position, had forced through the constitution, and strongly sympathized with the English in the Napoleonic wars) to embarrass England in its warfare against Napoleon, prevented for many years any retaliation except that of the "embargo," a stoppage of trade with Great Britain which nearly ruined American commerce without seriously affecting hers; but at length war was declared in 1812, at which time the population of the United States was towards 8 million, and Louisiana had just been made a State. It lasted two years and a half, and was absolutely profitless, leaving the United States in exactly the same position as when it began, and not extorting a single concession from England;¹ the United States did not gain much glory, being generally beaten on land, — its most brilliant victory, the battle of New Orleans, was fought a month after a treaty of peace had been signed in England, — and the national capital destroyed and the chief commercial cities blockaded, and a series of splendid naval victories in the early part of the war being followed by a number of defeats in the latter part.

In 1819 — the States of Maine (set off from Massachusetts), Indiana and Illinois, Mississippi and Alabama, having been added to the Union since the last war — Florida (extending to the Mississippi and including towards 60,000 square miles) was formally extorted from Spain by the United States (which had seized it years before and still held it), giving the latter the eastern Gulf seaboard and exclusive control of the Mississippi; but after the creation of Missouri in 1821, no new State was formed for fifteen years, though population increased to 12,866,020 in 1830, and over 15 million when Arkansas and Michigan were admitted in 1836 and 1837. It was 17,070,240 in 1840, and over 20 million in 1845, when Florida, Iowa, and Texas took their places. Meanwhile, a severe and costly war had been waged from 1835 to 1842 against the Seminole Indians in Florida, primarily because they harbored fugitive slaves from Georgia plantations; they fought with great bravery in the almost inaccessible Everglades, but were finally reduced and shipped to Western reservations. The annexation of Texas,

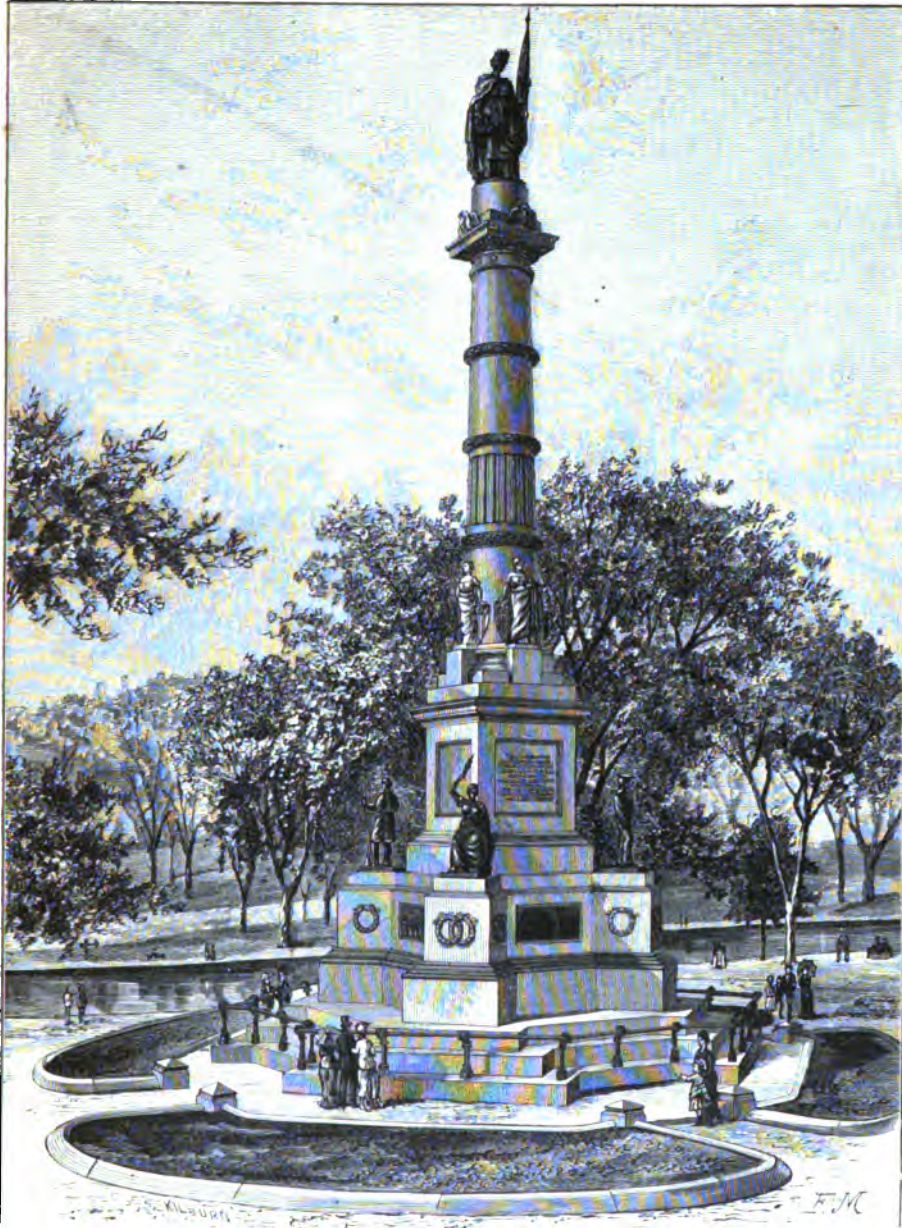
¹ The right of searching neutral vessels was never formally abandoned by that power until in the American Civil War the United States exercised the right against her (the "Trent" affair), when she claimed with great indignation that the reverse was immemorial English doctrine, and the former discreetly accepted her acceptance of its position of 1812.

adding 375,000 square miles of territory,¹ at once brought on a war with Mexico. The former, originally a province of the latter, had been made an independent republic in 1835 by the brilliant audacity of a small band of American settlers who colonized it from 1820 on; it was nearly six times the size of New England but had about the population of a couple of mill villages. Mexico had never acknowledged its independence or relinquished the hope of reconquering it. The war lasted from the spring of 1846 to the fall of 1847, and was crowded with splendid victories of very small American corps over vastly greater Mexican armies; and forced from Mexico the treaty of Guadalupe-Hidalgo in 1848, by which it ceded California and New Mexico (extending to the Pacific, and covering 540,000 square miles) for \$15,000,000 and the assumption by the United States of all claims of its citizens against Mexico. A strip of 45,000 square miles on the south of this new territory was added by the Gadsden purchase of 1853 (for \$10,000,000, and Mexico giving up heavy claims against the United States for Indian depredations), and was the last accretion of territory by the United States till Alaska was bought from Russia in 1867 for \$7,200,000. The population in 1850 had become 23,191,876; Wisconsin had come in as a State, and California came in that year. Minnesota and Oregon were admitted in the next decade, and the nation's numbers swelled to 31,443,321 in 1860; and in 1861 Kansas was made a State.

From April, 1861, to April, 1865, the most gigantic civil war in the history of the world raged between a confederacy of States which seceded from the Union and proclaimed themselves an independent republic, and the national government, which sought to compel a resumption of their former relations. The Confederacy comprised the eleven southern and south-western States of Virginia, Tennessee, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, Texas, and Arkansas, containing 9,103,332 inhabitants and 722,500 square miles in 1860; the border slaveholding States of Maryland and Missouri were only prevented from joining it by military force; Kentucky vainly attempted to remain neutral and bar out the troops of both parties, but was overrun by both. As the last three, however, were drawn upon for men and supplies by the national government, it may be said that the Union retained 2,280,000 square miles of territory and 22,339,989 inhabitants: and its portion was incomparably the richer, as the South had little trade or commerce and a rough poor agriculture, few cities and small accumulations, and its population was made up of a small number of great planters owning about 4 million negro slaves, and four or five millions of poor farmers; while the North was crowded with wealthy business cities and rich with lucrative commerce, manufacturing, and agriculture, and its population mainly thrifty white laborers and business and professional people.

All mediæval Europe shared in and believed in the slave-trade; the peace of Utrecht gave England a monopoly of it, and Queen Anne took a quarter of the stock of a company formed to prosecute it. The colonies did not wish negroes sent there, and law after law was passed prohibiting their importation; Parliament annulled the laws and forced the colonies to receive the slaves. New England was active in the trade; but both the character of agriculture and the constitution of society there were incompatible with slave labor, and a strong public feeling early made the traffic disreputable. The system took deep root in the South, and became the basis of the entire social, political, and productive organization there; but as late as the begin-

¹ About 100,000 square miles were ceded by Texas to the United States in 1850, in consideration of the payment of 10 million dollars.



THE SOLDIERS' MONUMENT, ON BOSTON COMMON.

ning of this century, the leaders of the section deplored it and formed plans for abrogating it. The causes and history of the change cannot be discussed here; but before many years the system had come to be cherished with the fiercest passion, and even discussion of it in other sections held to be an excuse for any violence of repression. The admission of States was determined by considerations of preserving the balance

of free and slave States in the Senate, so that they repeatedly came in pairs of northern and southern; the Seminole war and the Mexican war were fought respectively to prevent slaves from escaping and to gain fresh territory for the slave system; the Ordinance of 1787 which excluded slavery from all territory possessed by the government was set aside by the Missouri Compromise of 1821, which fixed a limit of 36° 30' N., and this in turn was abrogated in 1854 to allow still further extension of the system; the government of Kansas was seized and held by open violence by slaveholding invaders backed by United States troops, and the State for years was a scene of murderous partisan warfare to recover its right of self-government: and in general it may be said that most of the domestic and much of the foreign policy of the country from 1820 to 1860 turned on the slavery question, and that the national government was steadily in the hands of the slave power.

Their increasing exactions and violence, however, gradually consolidated the free States against them: a national party hostile to the extension of slavery had received but seven or eight thousand votes in 1840, it received 1,800,000 or towards half in 1856; and in 1860 a split in the slavery party gave the Presidency to their opponents, — whose platform, however, disclaimed any right to meddle with slave institutions in States which already had them. But limitation of territory meant eventual breakdown for the slave system, which ate out its own life when it stood still; the slave States withdrew their allegiance to the Union (which they declared to be a simple league of independent members existing only at the pleasure of any one), and attacked a National military post shortly after inaugurating a Southern Confederacy. In the terrible war which followed, 2½ million soldiers were engaged, three-fourths of them on the Union side; many long and bloody battles were fought: but the superior resources of the rich and populous free States prevailed, and the last Confederate army surrendered in 1865, leaving the Southern territory impoverished beyond description, and the flower of their men of fighting age slain on the battle-field. The slaves were emancipated by the national government during the war, and West Virginia set off from Virginia as a State, — Nevada was also admitted with a very small population, owing to rich mines giving an as yet unfulfilled promise of growth.

After various periods of military government and other experiments in managing the conquered States, all were re-admitted to the Union on the old basis, though with the freed slaves made part of the voting population. Nebraska became a State in 1867, and the country's population in 1870 was 38,558,371; Colorado was admitted in 1876, — and despite an unparalleled business depression which occupied most of the decade, the population in 1880 was 50,189,209. Montana, North Dakota, South Dakota and Washington were admitted as States in 1889, and Idaho and Wyoming in 1890. The population by the census of 1890 was 62,622,250, in addition to Alaska 31,795, the Indians and others enumerated with them 328,199, in all 62,982,000.

Race Lineage. — The census of 1880 showed a native-born population of 43,475,506 against 6,677,360 foreign-born, — nearly one-seventh foreign; and large numbers of the former were of course from foreign-born parents. Nevertheless, the prevalent idea that the stock of the Revolutionary time is a subordinate factor in the blood of the "American" is a gross mistake, — it is by far the dominant one. Immigration amounted to nothing considerable till after 1840, when the population was already over 17 million — fully 15 million of it from the old stock, and multiplying with enormous rapidity: the eastern Mississippi Valley was almost wholly settled by the latter. From 1819 (when the first records of immigration were kept) to 1840, the

total number of alien arrivals by sea was only 750,000; during the next decade it was 1,653,000, being swollen by the Irish potato famine from 1845 on; a total from the first (allowing 100,000 previous to 1819, which is exaggerated) of about two and a half millions, and the total population was over 23 million in 1850. From 1850 to 1860 the population increased over 8,250,000, and the arrivals for the decade were 2,656,000; from 1860 to 1870 the total increase was 7,115,000, and the *net* immigration (excluding alien passengers not settlers) was 2,281,000; from 1870 to 1880 the increase was 11,631,000, the immigration 2,812,000; from 1880 to 1890 the increase was 12,792,000, the immigration 5,247,000. Say roughly, in 1890, 63 million people, and 15 million¹ immigrants, half of them received within twenty years; and a purely native stock of 15 million increasing rapidly since 1840. This shows the absurdity of the notion that the English blood is drowned out by other strains: it constitutes nearly or quite three-quarters of American blood to-day, probably more if the English portion of the immigration is added. Of the immigrants, the numbers of Irish and of Germans are almost exactly equal, and each nearly one-third of the total; the English come next, having sent more than a million, and in all some seventy nationalities are represented.

STATES AND TERRITORIES.

New England. — Few portions of the world with a long united historical existence behind them have or feel a more vital unity than this imaginary division, which never existed as a political entity except for a few years of loose confederation in the early life of part of its members. The name is only a name and a sentiment, yet it is a powerful reality in many vital respects. Its members—the six north-eastern States of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, and Connecticut—occupy a firmly defined territory, with unity of physical character which has turned their leading business activities into the same channels; they were settled by the same class of colonists, and the last two were direct offshoots from Massachusetts, though in exactly opposite ways and correspondingly different in history; their religious, social, and political ideas were substantially the same (even Roger Williams was a Puritan), and markedly different from those of any other colonies, and have impressed a salient character on the whole fabric of society,—the people are alike, the towns are alike, the schools and churches are alike, speech and manners are alike; and the States are in all vital matters usually ranged on the same side. One of the leading causes of this unity of character is that for many years the Congregational Church was the established church except in Rhode Island, and supported by tithes collected by law from all sects alike, and this very establishment proves the community of those who imposed it. The common nickname of “Yankee” belongs to the people of this section, though Southerners usually apply it to all Northern people, and foreigners often to all Americans alike.

This section, 66,465 square miles in area, extending from New York to New Brunswick, has the ocean on the east and south, New York and Canada on the west, and Canada on the north. It is physically two divisions, rather than one: Maine is the first and nearly half the whole,—a forest-clad slope with a few mountains, end-

¹ The unrecorded Canadian accessions may be set off against the arrivals who did not become permanent inhabitants.

ing in plains and estuaries; the remainder is chiefly a rectangular block of parallel longitudinal ridges. Both divisions are full of short swift streams in rocky beds, rising in the hills and making their way to the sea or greater streams by a succession of reaches closed by cataracts or rapids, a source of water-power once thought exhaustless which first built up New England manufacturing. It contains among others three of the most beautiful of the larger rivers draining the eastern Alleghany slope: the Penobscot and Kennebec, wholly in Maine; and the Connecticut, the artery of the other division, running from its northern extremity to the sea, forming the boundary between New Hampshire and Vermont, cutting off the western quarter of Massachusetts, and dividing Connecticut in the centre. The widely famed valley of this lovely river is the most fertile part of New England. Only forty or fifty miles of the river's course of 400 are made navigable for vessels of eight to ten feet draught by incessant dredging, and down to within sixty miles or so of its mouth it falls over a succession of small cataracts or brawls over rapids. Its banks are lined with cities and thriving villages, and nearly its whole course is followed by railroad lines. The population of the counties which are intersected by it or abut upon it is about 600,000.

The natural resources of New England, aside from ice and building-stone, and the lumber of Maine, are very small: with mostly a poor hard soil and almost no mines, hardly any part of America would have been thought less promising of a great future, despite its excellent situation for fisheries and commerce. But it had a colonization which would have made a future in any habitable clime; and its manufacturing industries, with the American patent system, have made it a region of inventors and automatic machinery unmatched in the world. Nearly half its working population were engaged in manufactures in 1890, against little more than a sixth in agriculture.

But New England's greatest production has been of *men*. For a century it has poured unceasing streams of youths, to whom the sterile hill-side farms afforded no subsistence, to develop the rich agriculture of the West or build up cities elsewhere: and there is not one of its component States but has more descendants in the West than its entire present population.

Maine.—The "Pine Tree State," the north-eastern apex of the Union, extends its 33,040 square miles a hundred miles north of any other Eastern State, with Quebec on the north and New Brunswick on the east. Its northern portion is pierced by the Alleghany range, throwing detached masses southward, of which Ktaadn's summit (5200 feet) is the loftiest in the State; it slopes through a broken country down to a flat and sometimes swampy coast, of such surpassing raggedness that with a direct length of 278 miles it has 2486 of coast line, bordered with clusters of islets covered with villas and summer hotels,—for its entire coast is one great summer watering-place for New England and New York. Mount Desert, the largest island, is perhaps the finest of northern seaside resorts.

The two great central rivers of Maine are gatherings of the waters from a wonderful maze of lakes and forest brooks,—beloved of anglers, and still abounding in trout and pickerel despite the exterminating swarms of fish-slayers from the southward,—which fill the northern half of the State and occupy a tenth of its surface. The deep clear Moosehead Lake is the largest of these, 35 miles long and from 2 to 10 wide, the last of a long connecting chain. From it flows the Kennebec, which 40 miles from its mouth bears sea-going steamers on its deep-blue waters between sheer banks of rock or green hills, close to which vessels can come and load. The Penobscot, fed

by the eastern portion of the same mass of lakes, is even greater in volume, and navigable for 60 miles above its close in a great estuary called Penobscot Bay. The northern part of the State is drained by the St. John, under its early name the Wal-



A MOOSE.¹

loostook; and in the south-west important places are built up by the fine water-power of the Androscoggin and Saco, rising in Northern New Hampshire and sinking over 1250 feet in 160 and 175 miles of course.

The northern part of the State was till recently a great unbroken forest; the lumberman's axe is making heavy inroads on it, but it still harbors moose and caribou and

¹ From "Woods and Lakes of Maine," by Lucius L. Hubbard. Illustrated.

deer and other wild animals long since vanished from Southern New England, and in a business aspect makes the lumber trade the head of the State's prosperity (the Penobscot is a river of lumber rafts), and the manufacture of wood into every conceivable article (including paper and glucose) is extremely flourishing. Ice creates also an important industry: the Kennebec's pure water and steep shores have lined it with ice-houses. But perhaps more of the 661,086 inhabitants are employed in the rich fisheries and the canneries (the latter of world-wide note) than in any other single branch: in the interior, the late summer sees many thousands of acres of sweet-corn and other vegetables and fruit made tributary to the canneries, and on the coast the canning of lobsters and salmon, and of small herrings known as "American sardines," employs thousands of hands. A third of the people are employed in manufactures. Less than 60,000 are of foreign birth, more than half the latter Canadians, chiefly French, perhaps evenly distributed between farms in the North and mills in the South.

The chief city is Portland, on Casco Bay in the south-west, a beautiful city of nearly 40,000, with a noble harbor never closed by ice; it is a very important railroad and steamer centre. The next in size are Lewiston-Auburn, with over 33,000 (two in municipal government, one in business), a twin mill city across the falls of the Androscoggin, and Biddeford-Saco, a corresponding dual unity of 20,000 spanning the Saco. The Kennebec has built up a line of thriving villages, of which the chief are Augusta the State capital (10,250), the beautifully picturesque Gardiner (5500), the head of navigation for considerable vessels, and ship-building Bath (8700); the Penobscot is headed by the great lumber centre Bangor (19,000), and its bay by Belfast (5300) and Rockland (8000). The famous Bowdoin College is at Brunswick in the south-west. Houlton and Presque Isle are the markets of the north-eastern Aroostook business, a fertile oasis in the forest.

New Hampshire.—The "Granite State," the "Switzerland of America," which began separate existence in 1741, is a wedge 176 miles long with 9305 square miles of surface. The Connecticut divides it from Vermont; the leading river of its own is the Merrimac, only 150 miles long and a mass of cataracts, but with seven cities of above 10,000 people on its banks, four of them in Massachusetts. Maine leaves it but 18 miles of ocean on the south-east. The northern half is wholly the forest-clad White and Franconia Mountains, sloping to the beautiful and fertile Connecticut Valley. The peaks of this range are the highest of the Alleghany system except in North Carolina, Mount Washington being 6285 feet high, Adams 5776, Jefferson 5714, Clay 5553, Madison 5365, Monroe 5361, Lafayette 5290, and several others over 4000; it throws off fine solitary peaks, of which Moosilauke (4790), Monadnock (3718), Chocorua and Kearsarge (3540), are the most imposing. South of the range are some beautiful lakes, of which Winipiseogee—22 miles long, with deep pure waters 472 feet above the sea—is the largest.

The generally poor and stony soil of New Hampshire could not sustain its 376,530 people, and two-fifths of the workers are employed in mills and shops (against less than a third in agriculture), and in lumbering in its northern forests; and it produces great value in granite, soapstone, mica, and ice. But the magnificent scenery of the White Mountains, and their charms for the sportsman and angler, are even more commercially than æsthetically or personally valuable: the money spent every year by the throngs of tourists is fast becoming the most important revenue of the State.

The chief business development has been along the Merrimac, where Concord the State capital (17,000), Manchester the largest place in the State (44,000), and Nashua (19,300), all the seats of vast manufacturing interests, succeed one another down the river. The slender seaboard has the splendid harbor of Portsmouth (10,000), one of the finest in America, with a rocky bottom covered at low tide by nearly forty feet of water; on the opposite side is Kittery in Maine, with an idle government navy-yard. The Piscataqua River, an estuary eight miles long, formed by the Cocheco and Salmon, flows into this harbor; and on the Cocheco, three miles above its head, is the manufacturing city of Dover (13,000), the oldest settlement in the State, dating from 1623. Rochester (7400) is a flourishing railroad centre higher up the stream. The chief places in the west (both manufacturing villages) are Keene (7500 on the Ashuelot (a tributary of the Connecticut) and Claremont (5500) on the great river. Dartmouth College is at Hanover in the Connecticut Valley.

Less than 50,000 of New Hampshire's people are foreign-born, over half these Canadians.

Vermont. — The Green Mountain chain of the Alleghany system covers the State named after it with the slopes and summits — the loftiest Mount Mansfield, 4430 feet — of two ridges (the higher and steeper on the west), clad with both deciduous and evergreen forests, and sometimes based on marble of all colors and of the finest quality. It is a State of successive hill-ranges sometimes rising to the dignity of mountains; and its 9565 miles of area extend 150 miles from Canada to Massachusetts, and in much less breadth from the Connecticut next New Hampshire to Lake Champlain and New York.

This immense loch — 125 miles long, 14 wide at the north, narrowing to an inlet less than a mile wide in its southern course — partially recompenses Vermont for being the only one of the New England States without seaboard or navigable streams; it has built up a considerable commerce through its outlet the Richelieu which flows to the St. Lawrence, and the Champlain Canal which connects it with the Hudson. The interior rivers are large brooks, valuable for waterpower and railroad construction.

Despite its hills, the soil of Vermont is good, and along the Connecticut and in the north-west exceedingly fertile; and its pasturage is unsurpassed. Nearly half its 332,422 inhabitants (40,000 foreign-born, of whom 25,000 are Canadians) live by agriculture, against little over a fifth by manufactures: the butter of its dairies is prized all through New England, all kinds of stock-raising flourish, and the breeding of first-rate Morgan horses is a specialty of the north-west. But of its native products, the most distinctive is maple sugar, in which this State and New York far outrank all



SAMUEL CHAMPLAIN (1567-1635).

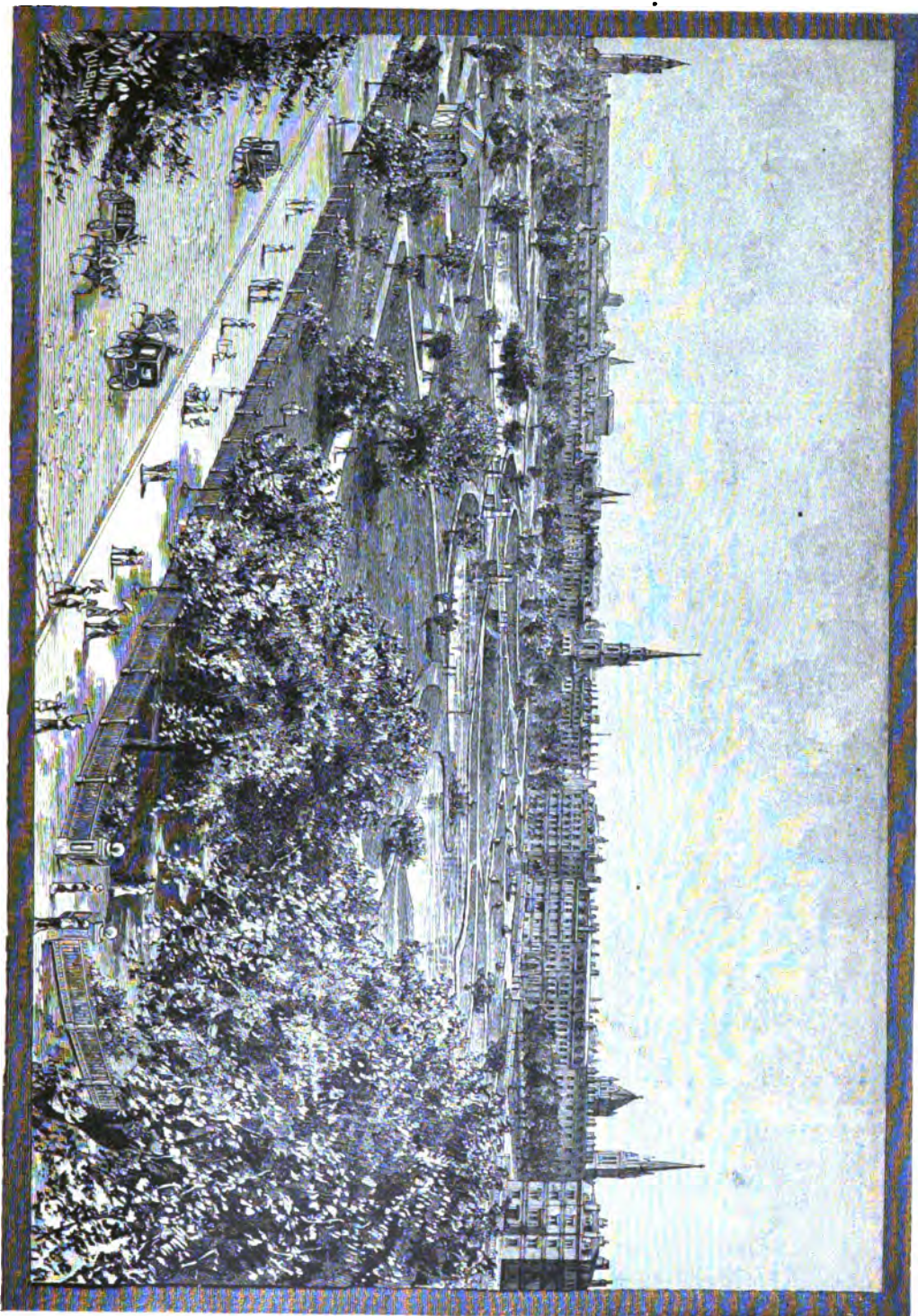
others. The sugar maple will not yield its sweet sap abundantly except in cold dry climates; and Vermont has compensation for the long severe winters in its great maple orchards, where in early spring evaporating pans receive the sap gathered from the dripping of thousands of small wooden spouts, and boil it to a syrup or a pasty crystallizable mass.

Almost none of the people live in cities. The largest place is Burlington (14,500), representing the Champlain business, superbly resting on a hill 300 feet above the lake. Rutland (11,750), south-west of the centre, is a town of marble from quarries close by, and of foundries; Bennington (6500), in the extreme south-west, gives its name to an important Revolutionary battle which was fought several miles away on New York soil. St. Albans in the extreme north-west (8000) is a famous butter and horse market, with manufacture of locomotives. The Connecticut Valley interests are headed by Brattleborough, a lovely village of 6800 people near Massachusetts. The capital, Montpelier (4100), is a pretty manufacturing village near the exact centre.

Vermont, quarreled over by New York and New Hampshire, and given to the former but savagely fighting its authority, proclaimed itself a State in 1777, but was not admitted to the Union till 1791, owing to New York's opposition. The story of the "Green Mountain boys" is one of the most romantic portions of American history.

Massachusetts. — The southernmost three of the New England States have the common feature that each was formed by the union of two independent settlements, and the original duality has left traces still visible in all, — including a double capital in one, and till recently the same in another. Massachusetts was the fountain of both the others, and its chief city always the political and mostly the commercial head of New England. It is a narrow rectangle, curving north-east to include the lower Merrimac, and with a large south-east extension ending in the huge sandy hook of Cape Cod, — one of the great landmarks of the Atlantic coast, known well to the Northmen near nine centuries ago. The western lies upon low parallel ridges of the Green Mountain chain, — between two of which is the beautiful Berkshire Valley, a noted summer resort, drained north by the Hoosac into the Hudson, and south by the Housatonic into Long Island Sound, — and consists largely of the steep narrow valleys of petty brooks, almost dry in summer but swelling in freshets to broad, furious, destructive torrents; the centre is a broken country of poor flinty soil; the eastern part ends in sandy plains and marshes with strips of pine woods, and great numbers of small shallow lakes. The only considerable streams are the Connecticut, running through the western section, moderately navigable but not now navigated; and the Merrimac, navigable 16 miles to Haverhill. The seaboard is deeply indented by several great bays: those formed by Cape Ann and Cape Cod, Massachusetts Bay and Plymouth Harbor, and Buzzard's Bay at the south cutting off Cape Cod but for four miles of low ground, — an inviting place for a canal, which has been fought over by rival companies for many years, but is not excavated with great zeal.

Massachusetts has some agriculture and dairying in its 8815 square miles, — the cranberry bogs of Cape Cod are a valuable specialty, — and good quarries; but its surpassing importance is in fisheries and manufacturing, over half its 2,238,943 people living by the latter, while the trivial number of about one-tenth are all that the farms and gardens maintain. It owns over half the fishing vessels, and does seven-eighths of the entire whaling business, of the United States. Specification of its manufacturing industries is simply impossible, and it is no part of this plan, but it may be said that



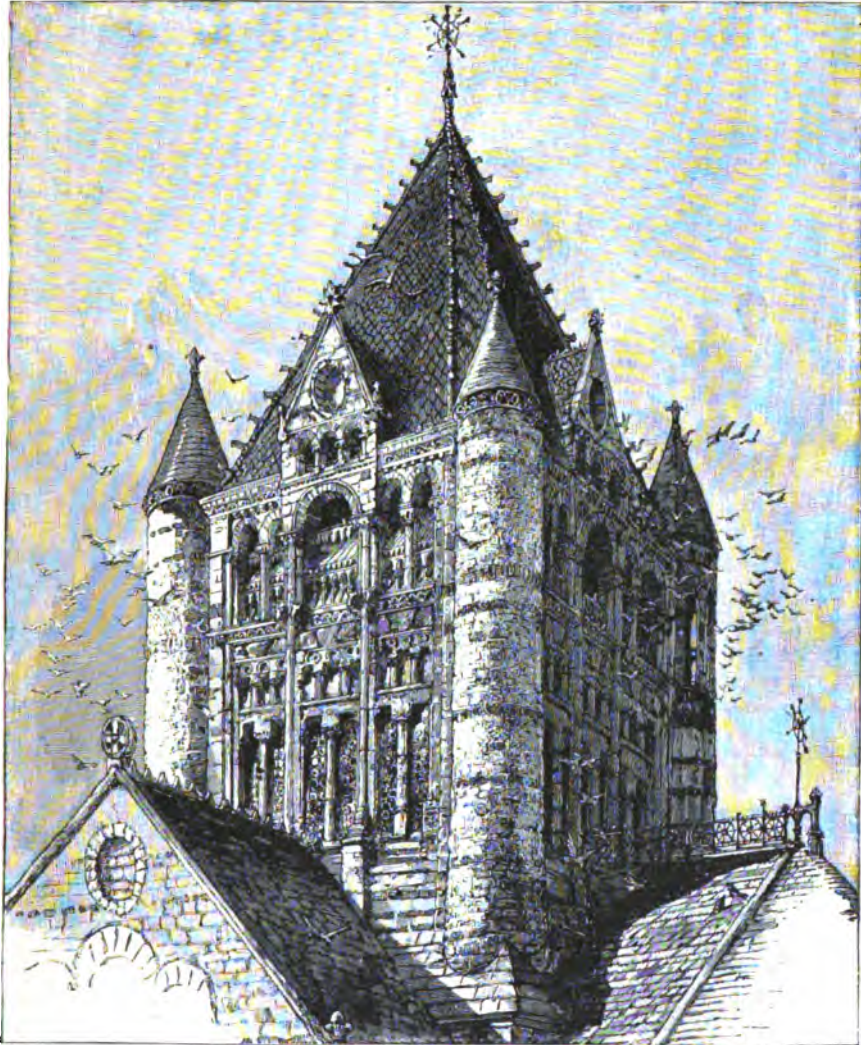
BOSTON — THE WEST END.

its greatest predominance is in leather and rubber: Eastern Massachusetts is one great hive of shoe factories, where automatic machinery is carried to the highest perfection. But machinery has increased instead of diminishing the need of human skill, and nowhere is there wider scope for individual excellence or a larger class of mechanics fairly entitled to rank as artists. Over three-fourths of its people are of native birth; of the foreign-born, one-fourth are Canadians, and one-half Irish.

The capital, the head and pride of New England (frequently styled in foreign publications the "capital of New England"), is Boston, on a harbor ten miles long, studded with lovely islands. Originally built on the three-hilled projection of a narrow sand-spit at the estuary-mouth of the Charles River, — a highly picturesque site, to which its nucleus of narrow curving streets has lent architectural charms impossible to checkerboard cities, — it has long since swarmed over great distances of adjacent mainland in every direction, reclaimed from the ocean far more than its original area, and created the most beautiful suburbs in America for many miles around, some of them considerable cities themselves. The municipality of Boston has 448,477 people; but the single suburb of Cambridge across the Charles (seat of Harvard University, founded only eight years after the Indian name of Shawmut and the English of Trimountain had been dropped for that of Boston) contains over 70,000, several others from 10,000 to 40,000 each, and the actual population of the district inhabited by Boston business men and laborers is now over three-quarters of a million, making it the fourth city in the Union. Its commerce has increased enormously within a few years, owing to the costly harbor improvements carried through. A disastrous fire in 1872, which laid eighty acres of the business centre in ashes and destroyed \$100,000,000 worth of property, caused that space to be rebuilt in an unsurpassed collection of business palaces. Its historic interest surpasses that of any other city of the Union, owing to its leadership of the Revolutionary movements and its general position as head of the New England colonies; and its most famous two buildings — Faneuil Hall and the Old South Church — have seen more public meetings of the first importance than any others in the country, the latter being the gathering-place of the mob which threw the tea into the harbor. It was till very lately the undisputed head of the literary, artistic, and musical culture and creation of America, and its claims are even now challenged only by New York.

Massachusetts is thick with populous centres of business, of which only the chief can even be named. The extreme west is headed by Pittsfield (17,000) and North Adams (16,000) in the Berkshire Valley; the latter the western terminus of the Hoosac Tunnel, — one of the great works of the world, $4\frac{1}{2}$ miles long, pierced through a spur of the Green Mountains, where the Deerfield River from the north turns sharply east to join the Connecticut. Westfield (10,000) on the Westfield River ten miles west of the Connecticut, is the chief seat of whip manufacture in the United States. The Connecticut Valley's chief centre is Springfield (45,000), an important railroad centre eight miles north of Connecticut; three miles up is Chicopee (14,000), and five miles still north is Holyoke (36,000 with South Hadley Falls across the river), a city of paper mills where the Connecticut pours its volume over a dam 1019 feet long. Northampton (15,000), nine miles farther up, is an old town of great beauty, perched on hills above a long reach of meadows that skirt the river. Worcester in the southern centre (85,000), the second city in the State, is an old city long ago the junction of post-roads from every part of New England, now an equally important centre of railroads, and full of flourishing manufactures, especially of machinery and hardware;

Fitchburg (22,000) is a smaller counterpart on the northern side; **Marlborough** (14,000) between them to the east is a place of boots and shoes, **Clinton** (10,500) of carpets, and **Milford** in the south (9000) of shoes. The **Merrimac** holds **Lowell** (78,000) and **Lawrence** (45,000), great cotton-cloth places; **Haverhill** (27,000), a boot and shoe city; and **Newburyport** (14,000) near the mouth, a general manufacturing and



TOWER OF TRINITY CHURCH, BOSTON.

commercial place. In the south-east the leading places are **New Bedford** (41,000) on the southern shore, the head of the whaling industry, nearly ruined once by its decay, but now increasing fast; **Fall River** (74,000), a cotton-spinning city and seaport, on the Taunton River estuary flowing into Narragansett Bay; **Taunton** (26,000), 15 miles north on the same river, famed for locomotives, nails, and stoves; **Attleborough** (7,600), a collection of separated villages, the chief seat of the cheap-jewelry

manufacture; and Brockton (27,000), full of boot and shoe manufactories. On the coast, Gloucester on Cape Ann (25,000) is the head of the fisheries of the United States; Salem (31,000), once the rival of Boston and head of the India trade, is now mainly a manufacturing city; Lynn (56,000) is the greatest of the boot and shoe cities; Plymouth (7290), the seat of the first English colony in New England, venerated as the landing-place of the "Pilgrims" in the "Mayflower," on the upper part of Cape Cod Bay, has prosperous manufactories. Many small places are the seats of important specialties, which they even monopolize: thus, Granville Corners (a hamlet 19 miles west of the Connecticut) makes nearly all the drums of the country and a large part of the wooden toothpicks; Leominster near Fitchburg is mighty in horn goods, etc.

Nantucket is a sandy island about fifteen miles long by two to five wide, south of the eastern part of Cape Cod; in former years it was the chief seat of the whale fisheries, but crushed by a series of terrible disasters to its whaling fleets and the decay for a time of the industry, it has sunk from about 10,000 inhabitants once to 3265 in 1890. It is, however, receiving a new life as a summer residence of great beauty and delightful climate.

Martha's Vineyard is a larger island west of Nantucket, 21 miles long and semi-circular in shape, separated by five miles of Vineyard Sound from the Massachusetts mainland. It is notable chiefly for a grand "camp-meeting" which is held there every summer, but has outside of this a large summer population, and 4300 permanent inhabitants.

Massachusetts was formed in 1692 by the union of the colonies of Plymouth, founded by the "Pilgrims" (Separatists) in 1620, and that of Massachusetts Bay, founded by Puritan anti-prelatists (not Separatists) in 1628; and in 1695 the islands, previously under a separate government, were added to it.

Rhode Island. — The smallest State in the Union, with but 1250 miles of area, has remarkable natural advantages which have given it the densest population to the square mile (255) of all. These are the great sheltered island-barred inlet of Narragansett Bay, 28 miles long and from 2 to 12 wide, receiving the estuaries of the Providence and Taunton Rivers, — a beautiful piece of water, utilized both for commerce and pleasure; and a number of short streams furnishing immense water-power, — the Blackstone River especially being little more than one long rapid from its source near Worcester in Massachusetts to its mouth in the Bay 75 miles below. Massachusetts possesses several great towns developed by Narragansett Bay or offshoots of Providence manufactories, and properly Rhode Island's. The latter is a State of mills, shipping, yachts, and seaside villas, and of great watering-places, including Block Island some miles off the coast. But it has the disadvantage of a thin stony soil (except in fertile Aquidneck Island), and a sea-coast consisting mainly of a line of sand-bars cut off from the mainland by a nearly continuous series of lagoons and marshes.

Of the State's 345,506 people, two-thirds live by manufactures and only a ninth by agriculture; nearly a fourth (the same percentage as in Massachusetts) are foreign-born, a fourth of the latter being Canadians, and nearly one-half Irish. Two-fifths of the entire population (132,000) are in the city of Providence, one of the capitals, at the head of a deep slender arm of the bay, 44 miles from Boston. It is the second city in New England both in population and wealth, and an old political centre; a moderate port of foreign commerce, and a large one of interior trade: but its manu-

facturing interests are of the leading importance, it being especially the greatest seat of jewelry and silver-ware manufacture in the world. It contains Brown University founded in 1764. Newport, the other capital (20,000), on Aquidneck or "Rhode" Island, which divides the bay, is a seat of fashion and wealth rather than trade, one of the most fashionable resorts in the country, and its commerce is mainly one of pleasure yachts. It was, however, a very important trading-port in the last century, and had the unenviable distinction of being the last and greatest northern emporium of the slave-trade, which furnished much of its wealth. Bristol (6000) and Warren (4500) are Narragansett Bay ports. Pawtucket (27,600) is an overflow of Providence capital and business, the location (1790) of the first successful cotton mill in the country; Warwick (17,700) a similar aggregation of Providence factories a few miles south of that city; and Woonsocket (21,000) a cluster of mill-villages on the Blackstone next to the Massachusetts line, the central one having about half the total population. Westerly (7000), on the somewhat navigable Pawcatuck next to Connecticut, is a town of granite quarries and manufacturing.

Rhode Island was formed in 1647 by the union of the original colony of "Providence Plantations," established by Roger Williams in 1636 as a haven of

religious liberty, with that of Rhode Island proper settled in 1638, and a settlement planted at Warwick in 1643. It was the last to ratify the federal Constitution (1790); and adopted none of its own till 1842, when forced to do so by fear of an insurrection which even its adoption did not avert, due to the old charter committing the government to a small body of land-owners, and the changes of population making town representation grossly inequitable.

Connecticut. — The most southerly of the New England States, and the smallest in the Union except Rhode Island and Delaware (4990 square miles), has to the south Long Island Sound, a noble piece of navigable water, cut off from the ocean by Long



NEWPORT. — "THE OLD MILL."

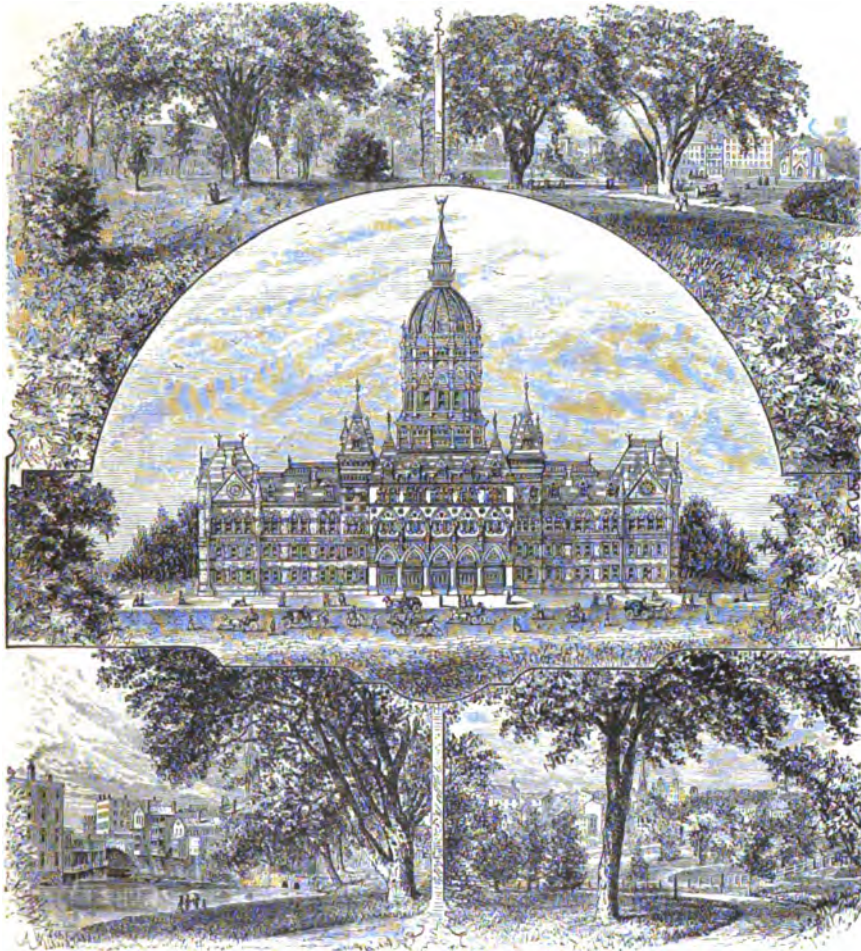
Island which belongs to and almost joins New York; and is composed almost wholly of the valleys of streams draining to the Sound. The broad Connecticut divides it into two sections about equal in size: but the eastern is little more than a third as populous as the western, contains only three places of over 10,000 people out of fifteen in the State, and but a half-dozen other sizable villages, and is rich neither in soil nor good city sites; while the western has much fertile soil and is crowded with manufacturing centres of New York capital. The best part of Eastern Connecticut is the valley of the Thames, a navigable estuary 15 miles long, — entering the Sound at New London, where it is a mile wide and of noble beauty, — beginning at the junction around the Norwich hills of the broad shallow Shetucket and the little Yantic. The former bears the name only from the junction (about 17 miles above) of the Willimantic and Natchaug, both rising in the Massachusetts water-shed; it is joined just above Norwich by the Quinebaug, which runs half its course in Massachusetts. Western Connecticut's chief river is the Housatonic, 150 miles long, rising in the northern marshes of the Berkshire Valley of Massachusetts, and entering the Sound west of New Haven; and its affluent the picturesque Naugatuck, dividing the section in the centre, is of even greater business importance. The Tunxis or Farmington, also rising in Berkshire and joining the Connecticut above Hartford after a most eccentric course, is the only considerable latitudinal tributary. The great river itself is navigable for ships to Middletown except when frozen up or when they strand on the shifting bar at its mouth; and except at low water considerable steamers ascend to Hartford.

Connecticut has always been celebrated for its manufacturers and inventors, — a Connecticut man invented the cotton-gin, which revolutionized the position of the South toward the slave system and produced the Civil War, — and its proximity to New York City has made most of the Western Connecticut cities little more than collections of factories owned by New York capital and with their head offices in that great city. About one-half its working population are engaged in manufactures, against about one-sixth in agriculture. Besides the cities, the State is crowded with villages having local industries of immense importance, often of world-wide fame: as Collinsville noted for axes, Thomaston, Bristol, etc., for clocks, Winsted for agricultural implements, Deep River for ivory turning, Northfield for pocket-knives, Thompsonville for carpets, Hazardville for powder, Willimantic for thread, South Manchester for silks, Chatham for bells (there are cobalt-mines near by), Colchester for india-rubber goods, etc. "Yankee clocks" have been famous for generations, and the same quarter of Connecticut where Seth Thomas manufactured them is still the chief seat of the industry. The manufacturies of wooden nutmegs, wooden oats, and basswood hams are located precisely where they always were — in the imaginations of lumbering wits. The chief of other industries is the propagation of oysters in artificial beds, which is carried on along the Sound to an enormous extent, especially on the shallow sandy beaches around and west of New Haven; and there are large iron-mines and foundries in Salisbury in the extreme north-west, and fine sandstone quarries at Portland on the Connecticut.

Hartford, the capital and second city (53,000), at the head of navigation on the Connecticut, one of the oldest English settlements in the State, dates from 1635, and was occupied still earlier by the Dutch. It has a famous manufacture of firearms and other heavy industries; but its chief importance is as a vast centre of capital in banking and insurance (both fire and life), — it is the wealthiest city per capita in

the Union, and the loans of its insurance companies have been a leading agency in the rapid development of the West.

New Haven, the largest city in the State (82,000), and till 1875 the alternate capital with Hartford, is on a handsome and capacious bay of the Sound west of the Connecticut, and has considerable commerce, but is chiefly of importance industrially as an enormous producer of metal goods. It is principally famed as the seat of



VIEWS IN HARTFORD.

Yale College founded in 1701; this and Harvard have always been the foremost New England centres of educational light.

The only cities in Eastern Connecticut are Norwich (16,000) and New London (14,000) at the beginning and end of the Thames estuary: the former a thriving manufacturing city on picturesque hills; the latter an old whaling port almost ruined by the decay of that industry, but recovering through its noble harbor, manufacturing, and the beauty of the neighboring seaside resorts. In the western half the specialty of Waterbury (33,000) is brass and copper; of New Britain (19,000), cut-

lery and fine tools; of Meriden (25,500), britannia and other metal goods; of Middletown on the Connecticut (15,000) much the same; of Danbury (19,000) hats; of Bridgeport (49,000), sewing-machines, cartridges, brass and iron goods; of Ansonia (10,000), — the largest town near the foot of the Housatonic, which is dammed at Birmingham), pins, brass and iron wares; of Norwalk (18,000), besides oysters whose beds are thick in the Sound, locks and knobs; of Stamford near the New York line (16,000), locks.

Of the State's 746,258 people, a fifth are foreign born, over half these being Irish. Connecticut was formed in 1665, by the union of the New Haven colony with the other settlements in this section. Till 1701 the capital was Hartford, and thence to 1875 the latter alternated with New Haven. The first written constitution in America was adopted at Hartford in 1639, but after the Revolution Connecticut lived under Charles II.'s old charter till 1818.

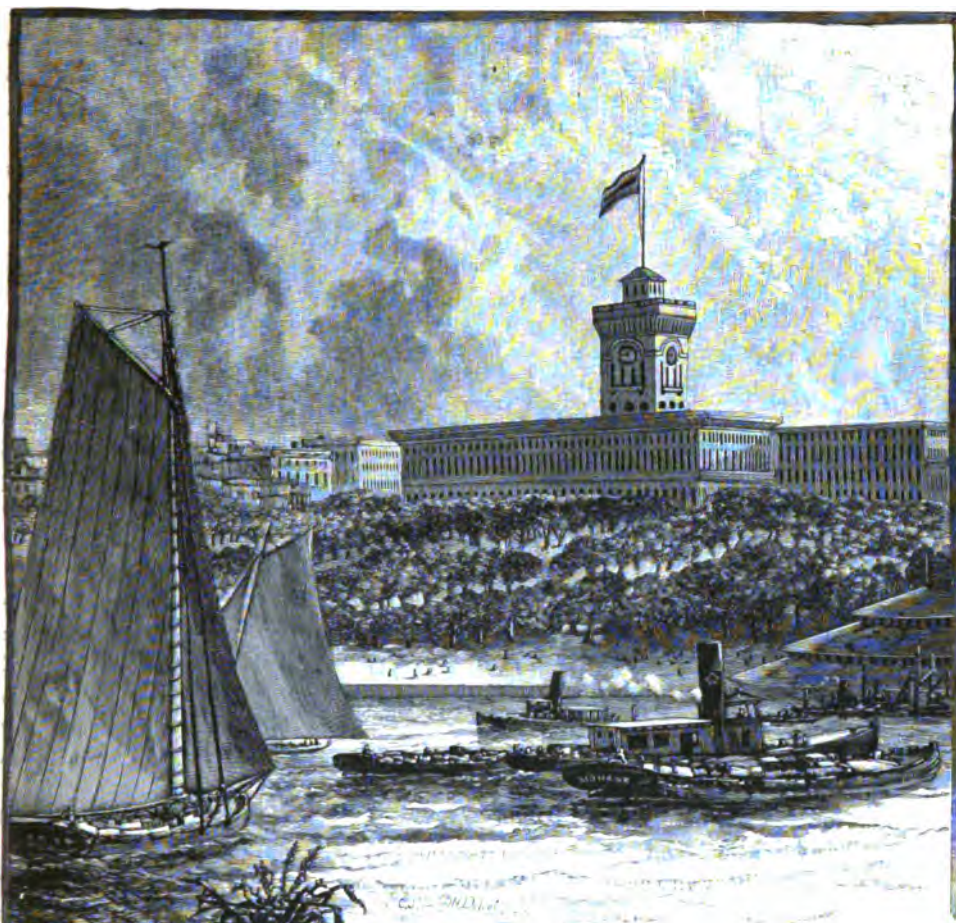
New York. — The "Empire State" — first in the Union in population, wealth, products, commerce, and financial transactions — is lavishly endowed by nature with the elements of empire. It has 49,170 square miles of surface, nearly as large as England, and its central and eastern part is one of the gardens of North America. Its mineral wealth is considerable, the product of salt and plumbago being the largest in America; its woodland is most valuable for lumber, and it leads even Vermont in product of maple sugar; its entire west and north are practically an ocean frontage on Erie, Ontario, and the St. Lawrence; through the eastern side flows a great river, the Hudson, navigable for 150 miles and a deep estuary for over a hundred, at whose mouth is the most valuable ocean frontage in America, besides all Long Island and part of the Sound; and on the north-east is Lake Champlain. In the centre is a remarkable series of parallel lochs, all navigable, and the greatest of them — Cayuga and Seneca — towards 40 miles long and two miles wide, and from 300 to 500 feet deep, Seneca's deep cold waters scarcely ever freezing over even when the others are covered with thick ice; they drain into Lake Ontario through Oswego River, fed also by the outlet of Oneida Lake, 20 miles by 6, outside this system.

The dairy products of New York are of enormous volume and the highest quality, and nowhere are the working farmers as a class more wealthy or the farming districts more full of visible comfort. That only a fifth of its six millions (5,997,853) of inhabitants are supported by agriculture is due to the number of large cities and the vast development of manufactures: over a third the total population are in New York City and Brooklyn, several hundred thousand more live in cities, the distribution of water-power over the State has covered it with villages sustained by manufactures, and one-third of all the workers are engaged in this class of industries.

The Hudson, the valley of its affluent the Mohawk (once the channel which drained Ontario into New York Bay), the great Erie Canal from the Hudson to the Niagara (opened in 1825, — now outgrown, but which in the days before railroads was the first great cause which set New York City so far ahead of all rivals, as being the outlet for the products of the West through Lake Erie), and the railroad system following them, have built up a wonderful line of cities for nearly 500 miles from the sea to Lake Erie.

First of all is the great emporium of the New World, the second city of the whole earth in population,¹ business, wealth, and financial importance; at

¹ London is the only one known to exceed it; the guesses at the population of Chinese cities are set one side.



NEW YORK CITY.—THE BATTERY AND PRODUCE
EXCHANGE.

first occupying the narrow Manhattan Island, — thirteen miles long, in a large sheltered bay, between the mouth of the Hudson and the arm of the sea (called "East River") which connects Long Island Sound with the main ocean, — but long since stretching for miles beyond it to the north, east, and west. Its nominal population under that municipal name and government is

1,515,301; but Brooklyn on Long Island just across the

East River has 806,343, Jersey City in New Jersey across the Hudson about 163,000 and the actual number in the

district of New York suburban residence and business is nearly $2\frac{1}{2}$ millions. From half to two-thirds of the entire import and export business of the country is done through this port, and its banks do nearly a quarter of all the loan and discount business, and hold nearly that percentage of all the deposits. Nor is it merely a vast collection of money-getters; it disputes the claims of Boston as a centre of litera-

ture, art, and music, has much admirable architecture (though its flat site and rectangular streets do not show it off to the best effect), has fine libraries of research and strong scientific societies, two great general colleges (Columbia College founded in 1754, and the University of the City of New York), and over 570 periodical publications.

Above on the Hudson are Newburg and Kingston (23,000 and 21,000) on the west bank, prominent coal ports; and Poughkeepsie (23,000) on the east bank between the above two. On the west bank 142 miles up is Albany (195,000), the capital of the State, on the site of the Dutch Fort Orange built in 1623, which fell into English hands in 1664. Its commerce is large, and it has extensive iron foundries, stove factories, etc. Six miles north is Troy on the opposite side (70,000, or 90,000 with its trans-Hudson suburbs), at the head of steam navigation, — a city of foundries and rolling mills, stove works, cars, bells, boilers, etc. Three miles north of Troy, at the mouth of the Mohawk, is Cohoes (22,500), a mill city, the river here descending 100 feet. West of Albany are Schenectady (20,000), a quaint old Dutch city with broom factories, and with the famous Union College founded in 1795; Utica (44,000), long the chief emporium of central New York; Rome (15,000), with manufactures of farming machinery; Syracuse (88,000), with vast manufacturing interests and a large commerce to Lake Ontario through the Oswego Canal, — notable for the immense salt works at the springs near by, a business established by the Jesuits in 1654 and long carried on by the Iroquois; Rochester (133,896) only 7 miles from Lake Ontario, and on the Genesee River where it falls 226 feet in two miles with three cataracts of 96, 84, and 26 feet respectively, — a city of flouring mills and an immense amount of other heavy manufacturing; and on Lake Erie at the beginning of the Niagara River is Buffalo (255,664), the third port in the Great Lakes, especially great in receipts of grain, coal, and lumber, and ranking next to Pittsburgh in Pennsylvania for iron and steel smelting and working, and with great flour mills and other manufactures. A southern branch has developed Auburn (26,000) with the largest manufactures of agricultural machinery in the country. The only considerable port on Lake Ontario is Oswego (22,000) towards the eastern end, one of the principal flour-milling places of the country, and notable for corn-starch.

The other chief line of business is along the Erie Railroad; but it is much subordinate, the only places on it of any size being Elmira (30,000) and Binghamton (35,000) in the southern centre. The central lakes have some good-sized villages at the extremities: the largest, Ithaca (11,000), is at the foot of Cayuga, the longest lake, and is the seat of Cornell University. Watertown on the Black River (15,000), at the extreme eastern end of Lake Ontario, and Ogdensburg (12,000) on the St. Lawrence, are the chief seats of business of the northern part.

The entire northern part of the State is a mass of mountains called the Adirondacks, full of small lakes and famed for picturesque scenery; and with the imposing beauty and majesty of the Hudson with its high rock walls, the charms of Lake George the southern satellite of Champlain, and the grandeur of the St. Lawrence, draw a great stream of travel northward every summer. The mineral springs of Saratoga (between Albany and Lake George), of great number, and of remarkable medicinal celebrity, have formed an excuse for the development of the greatest and most fashionable interior watering-place in America.¹

¹ The Revolutionary battle-ground of Saratoga, where Burgoyne's army was captured, was on the Hudson twelve miles east.

One-fourth of the State's inhabitants are of foreign birth, and nearly every nationality on earth is represented, even Greenlanders. In 1880 almost an even half-million were Irish, 356,000 Germans, 116,000 English, 84,000 Canadians, 20,000 French,



THE ELEVATED RAILROAD IN NEW YORK CITY.

15,000 Italians, 12,000 Poles, 11,000 each of Swiss and Swedes, etc. New York City is the greatest museum of nationalities in the world.

New York's first white settlers were the Dutch, who colonized Manhattan Island

in 1614 (calling their settlement New Amsterdam), and granted patroonships or seigniories along the Hudson, the effects of which are visible even yet. But it is curious that this State was even more the Empire State of the Indians than it is of the whites, — and it is more than a coincidence. The great Iroquois nation in its five primary divisions — Mohawks, Oneidas, Onondagas, Cayugas, and Senecas — stretched through the middle section of the State from the Hudson almost to the Niagara (the banks of that river being occupied by the Attiwendarons or Neutrals), along the river and lakes named from the tribes, and despite the insignificant numbers of its warriors it had in the middle of the seventeenth century annihilated almost every considerable tribe north of the Ohio; and but for the arrival of white men would probably have turned all eastern North America into an uninhabited wild.

New Jersey. — The character of this State's activities and history has been determined by its location and conformation. A narrow district between the greatest two cities of America, — a sort of peninsula between the Hudson, the ocean, and the Delaware, — on a warmish sea, with a coast of sandy beaches, it would naturally be filled with market-gardens and manufactories and seaside watering-places for their use; and it is so. A flat district between the capital of the United States and the headquarters of the British army and colonial military government in the Revolution, it must inevitably have been the Belgium of that war, and the theatre of the chief campaigns; and it was so.

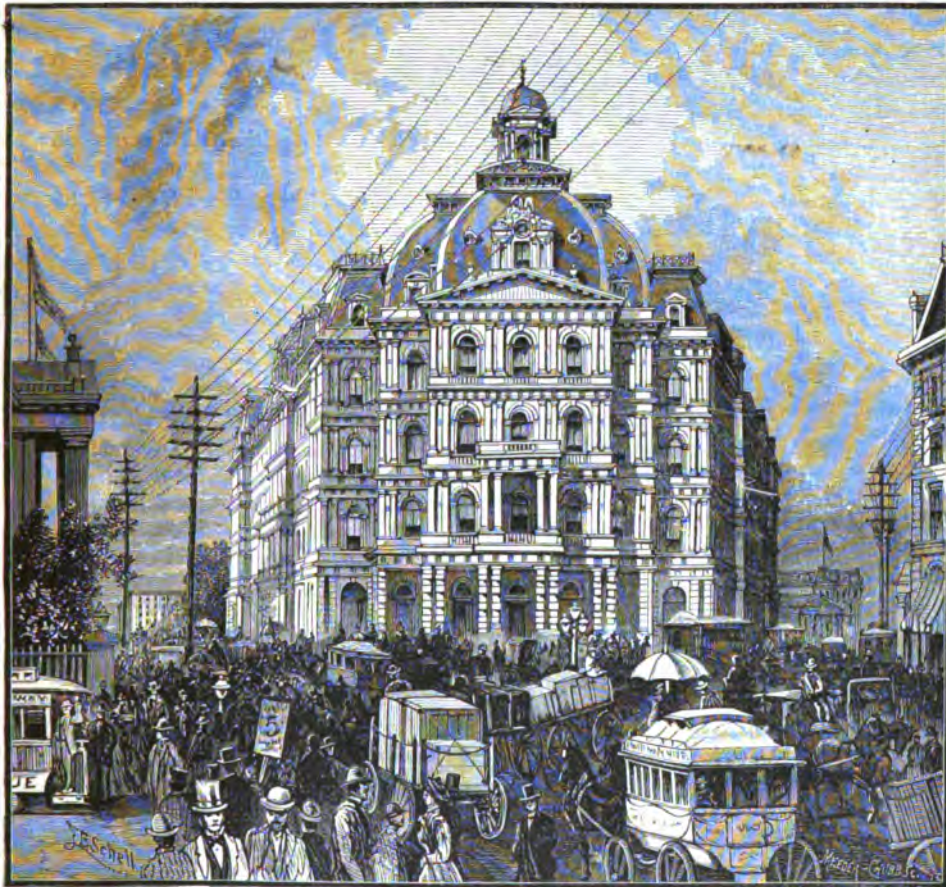
Its northern part is low mountains, — the Blue and Shawangunk; the centre, ridges of low hills with flat clayey stretches between; the southern half, sand and pine woods, with marshes along the coast, the latter being simply a line of narrow sand-bars with occasional breaks, separated from the mainland by sounds of considerable width. Of course, no rivers of great size can be formed, but in the northern hills there is much valuable water-power, and along the coast are navigable tidal estuaries of great usefulness.

The soil is fertile and easy of tillage, and farming profitable in orchards, nurseries, flower and vegetable gardens, etc.; but other things are so much more profitable that of its 1,444,933 people, only a seventh to a sixth are maintained by agriculture. Nearly half are employed in or supported by manufactures, some of them from its own products: its clay makes the best of gas-retorts, fire-brick, and pottery, and its moulding and glass sands, iron and zinc ores, etc., are very valuable. The seaside-resort industry is of even greater celebrity: from Cape May at the extreme end to the Lower Bay just below New York, its coast for a hundred miles is a succession of summer bathing-places, many of them of the highest fashion, — Long Branch, Ocean Grove, Asbury Park, Atlantic City, Cape May, etc., — whose easy accessibility from New York insures their permanence and increase.

The business development of north-eastern New Jersey is mainly suburban to and a part of New York: the line of residence towns built up by New York business and professional men extends for thirty or forty miles west, and Jersey City (163,003), Hoboken (44,000), and their companions along the Hudson are New York in all but name; while Newark (181,830, in 1880 136,508), Elizabeth (38,000), Paterson (78,000) the head of the United States' silk manufacture, New Brunswick (19,000) the head of its india-rubber manufacture, Orange (19,000), and the adjacent towns, are great manufacturing centres with New York salesrooms. Camden (58,000) is a suburb of Philadelphia just across the Delaware. The capital of the State, Trenton (57,500), at the head of navigation on the Delaware, has a thoroughly

independent existence, not only being the chief seat of the crockery and pottery manufacture in America (all from its own clay), but said to produce more than all the rest of the continent combined.

This section, fought for by Dutch, Swedes, and English, and as East and West Jersey repeatedly changing hands, was bought by Penn and consolidated in 1682, and became a separate colony in 1708. The Revolutionary battles of Trenton and



THE POST-OFFICE SQUARE, NEW YORK CITY.

Princeton, Monmouth and Red Bank, are household words ; the second is still better known as the seat of an important college.

One-fifth of the inhabitants are of foreign birth, — about 100,000 Irish, 75,000 Germans, and 35,000 English.

Pennsylvania. — The “Keystone State” — so called merely as the middle one of the original thirteen, but befitting the name as the connecting link between North and South : its climate in the north exhibiting all the changeable harshness of the former, that next to Delaware touched by the gentler breath of the latter, at once milder and more equable ; itself of old a seat of uncompromising hostility to slavery, but con-ter-

minous with one of the most unbending of slave States — is second in the Union in population and wealth. It is a rectangle stretching from Ohio and the West Virginia "pan-handle" to New York and New Jersey, and from New York to Maryland, with 45,215 square miles. Alone of the thirteen, it has not a mile of sea-coast; but it has practically such by the Delaware estuary, and 40 miles of valuable coast on Lake Erie.

The entire body of the Alleghany system, 200 miles wide, sweeps across it from north-east to south-west in parallel ridges, separated by deep green valleys of enchanting beauty, and pierced as plentifully as if they were sand-hills by its Atlantic-flowing rivers. They occupy diagonally most of the south-eastern half; the extreme south-eastern block is an extension of the great Appalachian Valley, the mountain sinking to a plain for fifty miles, — a low rolling district of immense fertility, traversed by sterile tracts called "serpentine barrens"; to the west and north-west of the mountains are short low broken ridges and narrow valleys, succeeded by a high plateau extending nearly to Lake Erie. The eastern river systems do not generally run between or parallel to the ridges, but cut directly across them, through rocky gorges or "water-gaps" of grand wild beauty; and the resulting swiftness of current and incessant rocky rapids render most of them unnavigable. The broad Susquehanna in the centre ought to carry ocean commerce through the heart of the State, but is so shallow and full of rapids as to be entirely worthless for navigation. Its main branch rises in the little Otsego Lake in East-Central New York, receives the Lackawanna from the east through a basin continuous with the famous Wyoming Valley, the West Branch (175 miles long) and the beautiful romantic Juniata (150 miles) from the west, and after a course of 500 miles and draining 22,000 square miles, falls a mile wide into Chesapeake Bay a few miles below the State boundary. The Delaware, dividing Pennsylvania from New Jersey, rises also in New York, and pierces the mountains in a gorge (Delaware Water Gap) two miles long, with sheer rock walls 1100 feet in height; 350 miles long, it is navigable for steamboats only to Trenton in New Jersey at high tide, and for ships to Philadelphia near the end of its true river course; it shortly becomes an estuary and ends in Delaware Bay. Its chief Pennsylvanian affluents are the Lehigh (90 miles), and the Schuylkill (130 miles) which divides Philadelphia. These rivers, fed by 42 inches of rainfall in the south-east, freeze in the winter, and the thaws common in January often break up their caps of ice for miles at once, turning the rapid streams into gigantic battering-rams with enormous blocks of ice for weapons, sometimes sweeping away every bridge and dam for fifty miles of a single water-course, desolating their banks, and piling up Titanic ice-monuments on the shore.

In the extreme west the noble Ohio, the one large eastern tributary of the Mississippi, and with the greatest volume of all, having a mean discharge of 158,000 feet per second, — the former line between the free and the slave systems, its basin a rough division between strongly marked physical and climatic belts, — is formed at Pittsburgh by the junction of the Alleghany and Monongahela, each itself a large and important river; the former, 350 miles long and in some sort navigable for 200, its system receiving 42 inches of rainfall, rises in Pennsylvania, flows north into New York and west along the border, then south again into Pennsylvania; the latter, 250 miles long and navigable for 60, rises in the Alleghanies of West Virginia. The united stream, a third of a mile wide, runs 25 miles in Pennsylvania, and in all 975 westward to the Mississippi, draining a temperate, fertile, and splendidly forested territory of 214,000 square miles, including among others the large basins of its affluents

the Tennessee, Cumberland, Kentucky, and Great Kanawha on the south, and the Wabash on the north. Its gentle current, only once broken by falls avoided by a canal, is one of the greatest commercial pathways to the ocean; but in summer it dries into unnavigability for large vessels much of the way, and it freezes over for three or four months in winter.

Pennsylvania is a State of coal, iron, petroleum, and lumber; of dripping and flowing subterranean galleries miles in length, where many thousands of laborers wield the pick and shovel, or manage the barrow, the tram, or the bucket; of mighty forges, reddening the sky by night and blackening the horizon by day, volcanoes of molten metal to be poured and wrought with a frightful danger to life and limb; of spouting oil-wells sometimes taking fire and streaming to the heavens in a vast geyser of flame, — of underground gas also, at present enormous in volume, but not yet proved to be permanent, — and of a net-work of petroleum aqueducts often hundreds of miles in length; of logging camps in its great hard-wood forests, of rafts on the cataract-broken streams unlashd above the falls and remade again below, of saw-mills and planing-mills; and from its coal supplies, of enormous manufacturing, ranking second in the Union, — next to



WILLIAM PENN.

New York, — and employing over a third of its population in them, nearly double the number engaged in agriculture. Yet its soil is among the richest in the country: it has in exhaustless profusion nearly every gift of nature in the temperate zone. And its magnificent varied beauty, of mountain, valley, and gorge, — the Juniata and Wyoming Valleys are of world-wide fame, — makes it beloved of tourist and artist.

South-eastern Pennsylvania and Delaware was the point where the feeble Swedish attempt at colonizing America was made, soon overthrown by the Dutch, who in turn succumbed to the English. In 1682 William Penn received his charter for the province, and for many years the inhabitants multiplied and prospered in a security from Indian massacres unknown to any other colony whatever: all owing in very considerable measure to the superior morality of the Quaker dealings with the Indians, and to the fact that the country was occupied by a tribe (the Delawares or Shawanoes)

under degrading vassalage to the Iroquois and forbidden to make war without their consent. In fact, the Quakers took less advantage of Indian simplicity in buying land for trinkets and utensils, than was done in most other settlements; yet afterwards, when the borders were desolated by Pontiac's confederacy, the Indians scalped Quakers quite impartially whenever they came within reach.

The most peculiar feature of its colonization was the settlement of such great numbers of south-Germans in the South-eastern valley that, alone among immigrants not divided from us by deep religious or racial barriers, they have absorbed the later settlers in that district instead of being themselves lost in the indistinguishable mass of "Americans," and retain their own individuality as a body; speaking a corrupt but vigorous and racy *patois* known as "Pennsylvania Dutch," and commonly so called themselves, along with their English, French, and Irish neighbors who speak the same dialect. They are thrifty and honest farmers (their small cramped dwellings and huge stone barns a striking feature of the Southern Pennsylvania landscape), and Americans of the intensest type in national feeling, but not greatly affected by progressive modern ideas.

Of the total population of over five millions (5,258,014), some 650,000 are of foreign birth: 260,000 Irish, 190,000 Germans, 90,000 English; and over 30,000 Welsh, more than in any other State, for the obvious reason that they are mostly miners. Mines, demanding for the most part only the roughest unskilled manual labor, are the great resource of the poorest foreign peasant immigrants, and native Americans will not often take up with this dismal, dangerous, ill-paid, and blighting labor; so that an American underground-mining district is *ipso facto* an unassimilated mass of Welsh, Scandinavians, Poles, Bohemians, Hungarians, Slavs, etc., one or all.

The great city of Pennsylvania the third in size of the New World is Philadelphia, the "Quaker City," on the lower Delaware, with 1,046,964 inhabitants; of right including the New Jersey city of Camden (58,000) across the river, making nearly 1,105,000. Founded by William Penn in 1682 at the mouth of the Schuylkill, in its present state much of it is an aggregation of manufacturing villages originally planted in the suburbs of the commercial city, which have coalesced with it as it grew. It is a "checkerboard" city, with a few diagonal avenues modifying the time-wasting inconvenience of the form. Its internal and foreign commerce is very large, it being virtually an ocean port; but it is mainly a manufacturing city, employing in 1880 no less than 220,000 hands in its mills and workshops. Its most noted institution, Girard College, is designed for poor boys, and is totally non-religious. Its Quaker population are but a drop in its present numbers, but have formed the skeleton on which its growth has been clothed, and its key-note is still a quiet, staid, but extremely patriotic respectability. It has a less percentage of foreign population than any other great Northern city. The independence of the United States was declared in its city hall, and it was the capital of the United States from 1790 to 1800. The next largest city is Pittsburgh, the "Smoky City" (238,617), at the formation of the Ohio, the head of the iron-smelting and glass-making industries of America. It forms properly, though not legally, one city with Allegheny (105,287) across the river. The north-eastern coal-field is headed by Scranton (75,000) on the Lackawanna, and Wilkesbarre (38,000) on the Susquehanna; the Lehigh Valley by Allentown (25,000), and at the junction of the Delaware and Lehigh is Easton (14,500); the Schuylkill Valley by Reading (59,000), with Pottsville (14,000) higher up, and Norristown (20,000) nearer

Philadelphia. Harrisburg (39,000), on the east bank of the Susquehanna, is the capital of the State. All the above are chiefly centres of coal and iron working and sale. The interesting old cities of Lancaster (32,000) and York (21,000) are the markets of the "Pennsylvania Dutch" district, the rich south-eastern valley; the former settled in 1728 and long the State capital, the latter in 1741 and the federal capital in 1777. The seats of the lumber trade are Williamsport (27,000) and Lock Haven (a village), both on the West Branch of the Susquehanna. Altoona (30,000) has great railroad car shops; it lies at the eastern base of the western Alleghany crest, where the railroad, after leaving the Juniata Valley, climbs the mountain by an unusual grade. The petroleum district has developed no large centres of trade; and the only other considerable place in the north-western third of the State is Erie (40,500), on the Lake, a prosperous commercial and manufacturing city with a good harbor, near the place where the tribe of Eries was annihilated by the Iroquois. Gettysburg, the scene of the gigantic three-days' battle which was the turning-point of the Civil War, is just north of Maryland.

No educational work in Pennsylvania is of greater importance for humanity than that now going on in the village of Carlisle, in the Cumberland Valley west of Harrisburg. Here is a school which — though cramped by the painful niggardliness with which money is doled out to it by the government — is educating hundreds of Indian boys (taken from savage wigwams in the reservations of the West, where they were growing up to a life of the lowest barbarism, a little hunting varied by begging and drinking and committing occasional outrages on the whites) in handicrafts and agriculture and the spirit



LORD DE LA WAR.

of civilization, and sending them back as missionaries to their tribes. The hope of an end to the "Indian problem" (for the Indians are not decreasing) rests on the work which is being done at Carlisle and in the various other Indian schools in the country.

Delaware. — This little State of only 2050 square miles, the smallest in the Union except Rhode Island, — 96 miles long, from 9 to 37 wide, — is the north-eastern side of the spindle-shaped peninsula formed by Delaware Bay (named from Lord De la War) and the Atlantic on the east and Chesapeake Bay on the west, about 6000 square miles in area and shared between three States. It has Maryland's straight parallels on the west and south, the curving bay on the east; on the north a segment of a circle twelve miles in radius struck from the court-house in New Castle, divides it from Pennsylvania. It has no inlets or large streams, and its coast is harborless and — like so much of the Atlantic seaboard — a line of sand-spits with shallow lagoons

inside. Delaware Bay is 55 miles long, from its arbitrary beginning near Delaware City to the ocean at Cape May in New Jersey and Cape Henlopen in Delaware, 13 miles wide at the latter spot and 25 in the centre, narrowing to 3. Its frequent shallows make it as defective for navigation as Henry Hudson found it, and an artificial harbor has been made at Cape Henlopen.

The northern end of the State is part of the beautiful south-eastern plain of Pennsylvania, a fertile rolling country of grassy upland and meadow: it sinks southward to a low sandy plain with a slight rise in the centre, abounding in marshes full of cypress and cedar. It belongs, in fact, to the South, and was a slave State, though retained in the Union: 29,000 out of its 168,493 people are colored. It has the mild winters and consequent character of production and timber growth, and to the south the relaxing atmosphere and prevalent coast fevers, which attend the lower parallels. Nearly a third of its people are engaged in agriculture; it is the fellow of Maryland as a "peach State," and a main reliance for peaches and berries of the northern markets; 55,000 acres of its soil being occupied by peach orchards alone, whose blasting by a too early frost is so anxiously feared that the regular rumor of it is a standing jest in the North.

Over a fourth of its inhabitants are employed in manufactures; yet its foreign-born population, usually drawn by mills, amounts to less than 10,000 or about 6 per cent of the total. Nearly all the manufacturing is in or near its one important city, Wilmington (61,000), built on a hill above the Delaware in the extreme north, where the historic Brandywine joins it. This is one of the great manufacturing centres of the country, especially in iron smelting, rolling, and working, and building iron steamships; the largest gunpowder works in America are near by. New Castle (4000), a few miles south on the river, Dover the capital (4000) in the interior, and Smyrna (3000) on a creek near the bay, are the only other places needing mention.

Delaware was occupied by a settlement of Swedes, Dutch, and English when it was bought by Penn as dominating Philadelphia's waterway, and their jealousy at the rule of the new Quaker government speedily brought about entire separation of the local government of the two provinces, though even after the Revolution the same government was at the head of both.

Maryland.—This old border slave State is the most eccentric in shape of any in the Union. Chesapeake Bay and the Susquehanna divide it into the "Eastern Shore" and the "Western Shore:" the former, about a third of the whole, shares with Delaware and Virginia the Chesapeake-Atlantic peninsula, and has a harborless frontage of 33 miles on the ocean; the Western Shore is reduced by the sinuosities of the Potomac to four miles in width at one spot, while along the Bay it is 120. It has an area in block of 12,210 square miles; but the Bay surface included is towards 2000.

Chesapeake Bay is a noble inlet, the largest on the Atlantic coast; nearly 200 miles long by 4 to 40 wide, 12 miles wide at its entrance, and with over 400 miles of coast line; with splendid depth of waters, floating the largest ships nearly to the mouth of the Susquehanna. It receives two of the largest rivers of the Eastern Alleghany drainage, the Susquehanna and the Potomac, and just at its entrance is the embouchure of the equally important James; and its shores are cut at short intervals by the navigable estuaries of a large number of shorter streams, giving Maryland more navigable waters in proportion to its size than almost any other State in the Union. The Potomac rises in the Alleghanies, breaks through the Blue Ridge por-

tion at Harper's Ferry, where it receives the Shenandoah from the south through the Valley of Virginia, 15 miles north of Washington descends 80 feet in two miles with one cataract of 35 feet, meets the tides at Georgetown three miles below the "little falls," and a mile below at the federal capital becomes an estuary a mile wide, flowing 120 miles farther (500 in all) into Chesapeake Bay, with six or seven miles of width in its lower course.



LORD BALTIMORE.

The Eastern Shore is of course a duplicate of Delaware in climate, soil, and productions; the Western Shore is of the same character south of the parallel of Washington, but north of this it rises to the Alleghanies (here only 2500 feet in extreme height), and the western section lies upon their steep rocky parallel ridges, separated by beautiful and fertile valleys known as "glades." As in all the States that slope from the Alleghany crest to the ocean, the climate varies from cool and wholesome in the hills to hot and malarious on the coast, and the surface is first hilly, and sinks by terraces to a sandy and swampy seaboard. Its people live by producing peaches

and berries and tobacco on the coast, famous butter and mutton in the glades and hills; from under ground come coal and iron and copper, fire-brick second only to Stourbridge, grindstones, hones, and millstones, and Epsom salts from native magnesite. But its best known and most delicious products, employing vast numbers of the inhabitants, are the Chesapeake Bay oysters, terrapin, and canvas-back duck: its oyster fisheries exceed those of any other State, every inlet and estuary being the breeding-place of a valued special sort, and supplying not only Northern tables but oyster-planters; and the laws regulating their taking have produced bloody battles between the authorities and poaching boats. The wild birds of field, wood, marsh, and seacoast make the State a grand autumnal rendezvous for sportsmen.

Maryland has but one large city, but that one is the great border city of Baltimore founded in 1729; the fourth largest¹ east of Chicago, and the largest from Philadelphia to the Gulf. It lies in picturesque beauty on a series of hills above the Patapsco River (an estuary), twelve miles from Chesapeake Bay, with a first-rate harbor, immense water-power near by, and vast proportions of both manufacturing and commerce. Close to the borders of the North, it is yet a Southern city in character, affiliations, customs, and population: a sixth of its 434,439 inhabitants are colored, it was the greatest of slave marts before the Civil War, and the Union troops had to fight their way through it as an enemy's country. It contains several of the most magnificently endowed public institutions in the country, including the great Johns Hopkins University for research and graduate study; and is the seat of the Catholic archbishop who is primate of the United States.

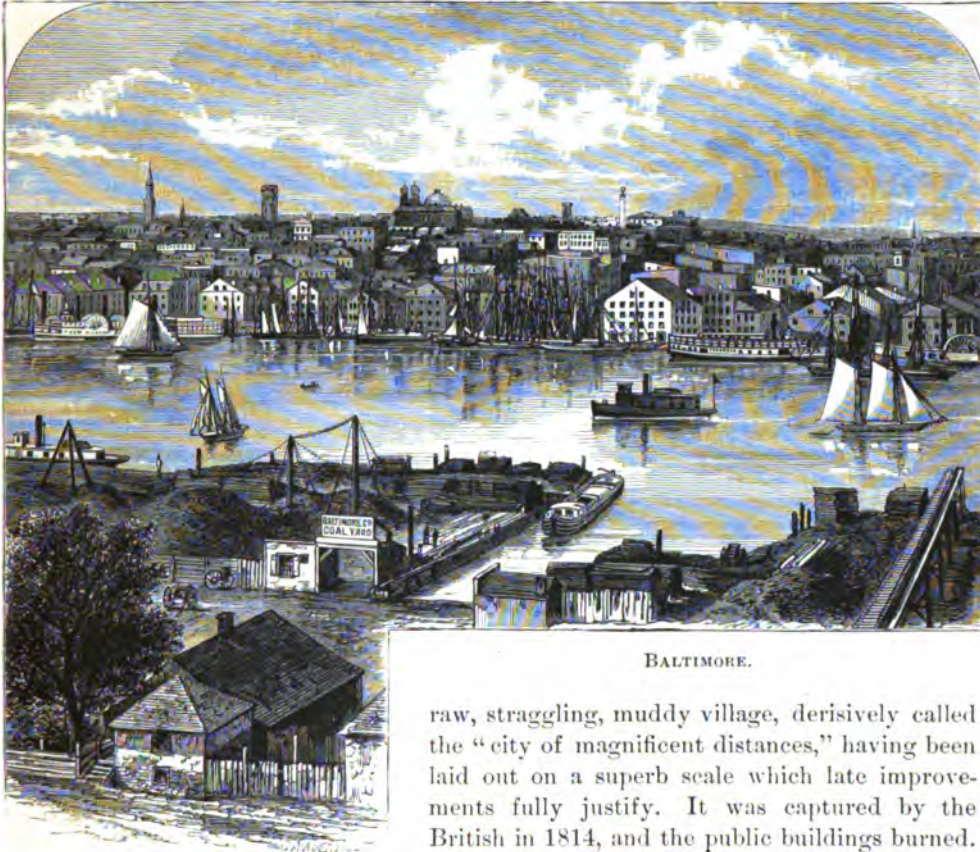
Annapolis, the State capital, is a place of 7600 inhabitants on the Severn estuary south of Baltimore; Frederick (8000) is the centre of the richest farming district of the west; Hagerstown (10,000) is a manufacturing town in the mountains near Pennsylvania; and Cumberland (13,000) a notable coal centre on the early Potomac. Harper's Ferry was the seat of John Brown's memorable attempt to excite a slave insurrection; and ten miles north was fought the bloody battle of Antietam, which stopped a Confederate invasion of the North, on the creek of that name near Sharpsburg.

Maryland was designed as a Roman Catholic community; but the knowledge that England would not suffer an establishment of that religion co-operated with Calvert's liberality to make it invite all Christian creeds to equal rights, the only interruption to which was a brief reign of Puritan proscription of the religion of Lord Baltimore. Always a vigorous and independent colony, it evaded or defied the British attempts to keep it poor and helpless, and overturned the proprietary government and established popular rule two years before the Declaration of Independence at Philadelphia. A State of slave-wrought plantations, it remained in the Union during the Civil War only under compulsion; and in 1890, out of, by the census, 1,042,390 population about 218,000 are colored. Less than 100,000 are of foreign birth, of whom the remarkable proportion of 55 per cent in 1880 were Germans, to a little over a fourth Irish.

District of Columbia. — In the early days of the Republic, Congress was exceedingly migratory, — partly under compulsion of the British armies, — and from 1776 to 1790 met in no less than seven different towns; but Philadelphia, then the commercial head of the States, was the preferred seat of government, and remained so from 1790 to 1800. It was always clear, however, that to subordinate the needs of

¹ In all these comparisons New York and Brooklyn are counted as a unit.

the national government to the will or caprice of a municipality and State was undignified and embarrassing, and certain to be injurious sooner or later; and in 1790 the gift from Maryland and Virginia of a piece of land ten miles square on both sides of the Potomac at the head of navigation, including the villages of Georgetown in Maryland and Alexandria in Virginia, was accepted. Congress met there first in 1800; and in 1802 the city of Washington was organized, on a site little fitted, perhaps, by nature for its new uses. It has, however, developed into one of the most beautiful and attractive cities not only of America but of the world. For many years it was a



BALTIMORE.

raw, straggling, muddy village, derisively called the "city of magnificent distances," having been laid out on a superb scale which late improvements fully justify. It was captured by the British in 1814, and the public buildings burned.

In 1846 the Virginia side, not having been used for government buildings, was given back to that State, leaving 70 square miles of territory for the District. Washington and Georgetown, and the County of Washington, existed as separate entities till 1871, though Congress had the sole power of legislation, and the people had neither votes nor representation. In that year the District was made a regular Territory, with an appointed governor and elected Delegate in Congress; after three years' experience this system was abolished, and the affairs of the District put into the hands of three appointed commissioners. The names "Washington" and "Georgetown" are retained for postal uses, but politically there are no such cities.

Georgetown, a mile north of Washington, is the port of the District, and has considerable commerce, besides manufacturing from the fine water-power of the Potomac. It is the seat of the famous (Catholic) Georgetown College, founded in 1789. Washington, containing the Capitol and other public buildings, extends from the river up a hill 72 feet high crowned by the national palace, and has its main avenues planned on such a magnificent scale of width that crossing one is a journey not to be despised, and the transaction of business is very burdensome. The city contains, however, other things better than mammoth buildings; among them the world-famed Smithsonian Institution for scientific research and publication, the Naval Observatory, and the Signal Office which issues forecasts of the weather. It is of necessity a foremost seat of "society" and fashion; but the United States has no one dominating centre to give laws to the rest in these matters.

The population of the District is 230,392, of whom almost a third are colored; Washington has about 190,000 inhabitants, and Georgetown perhaps 15,000. The future growth of the city seems only limited by the size of the District. People of means and leisure are choosing the place for their home and yearly add to its architectural beauty by the erection of elegant residences. There is talk occasionally of a possible removal of the capital to the West, to St. Louis for example, but the enormous "plant" invested in public buildings will probably never be sacrificed, the rapid improvements in transportation make centrality of constantly less importance, and no great city is ready to give up its municipal existence and submit to the obliteration of its individuality even to become the capital.

Virginia. — The "Old Dominion" (the oldest permanent English colony in America), the "Mother of Presidents" (seven were born there), lost over a third of its historic territory by the separation of West Virginia; but with its 42,450 square miles it is still a powerful State. Its western and northern portions share the mountains and the Valley of Virginia with West Virginia; its eastern side follows the Potomac and Maryland to Chesapeake Bay, includes the tip of the Chesapeake-Atlantic peninsula, and has a short strip of useless coast below the Bay. Besides the Potomac, it is chiefly drained by three large tidal rivers, forming as many peninsulas on the Bay (increased to nine by lesser inlets and streams): the Rappahannock next south, 200 miles long from the sources of the Rapidan, navigable to Fredericksburg 92 miles up, and an estuary for the last 70 miles; the York, a navigable estuary 40 miles long, formed from the Mattaponi and Pamunkey 125 and 80 miles in length, — on the peninsula below this, Cornwallis's army was trapped and captured; and the great James, 500 miles long: rising in the Alleghanies and breaking through the eastern ridges; falling over granite rocks, meeting the tides, and becoming navigable, at Richmond, 150 miles up; receiving the Appomattox from the south and the Chickahominy from the north, — memorable names; its last 50 miles an estuary sometimes six or seven miles wide; and ending at Hampton Roads, famous for the conflict of the "Monitor" and the "Merrimac."

West of the Blue Ridge extends the broad and beautiful Valley of Virginia, part of the great Appalachian Valley; rising from 250 feet above the ocean at the Potomac to over 3000 feet in the south; drained to the Potomac by the Shenandoah 170 miles long, to the Atlantic by branches of the Roanoke which drains Southern Virginia, to the Ohio by the New and the Holston, sources of the Great Kanawha and the Tennessee. From the Blue Ridge a succession of great stairways descends to the ocean: the "Piedmont district," "Middle Virginia," the "Tidewater Country": the first

foot-hills, the second a great plain deeply channelled by its rivers, and the latter low and swampy, the "Great Dismal Swamp" occupying a tract 30 miles by 10, covered by cedar and cypress, a mat of reeds, and a small lake. The coast region has 55 inches of annual rainfall, while the Valley of Virginia has but 40, and Piedmont 44.

The warm climate and friable soil rendered the Virginian plains the earliest tobacco district (of white men), and that plant has exhausted quantities of the once fertile soil, as it does the soil of every region given to its culture. A healthier agriculture of grain and fruits and market-gardening is fast developing, and it shares in the fish and oysters of the Bay. Manganese, coal, iron, and salt are produced, a few large manufactories are sustained, but the people are mostly farmers, fishermen, or oystermen, and only about 15,000 were of foreign birth in 1890, out of 1,655,980.



THE RUINS OF JAMESTOWN, VA.¹

The capital and chief city is Richmond, at the falls and head of navigation on the James, with over 80,000, or 90,000 including Manchester across the river. Founded in 1737, it has been for over a century a leading centre of Southern wealth and fashion, and of its best social, political, and intellectual life. It was a great slave-mart, the capital of the Southern Confederacy during the Civil War, and over a third of its people are colored. Petersburg south of it, at the falls of the Appomattox (22,600), an affluent of the James, has some manufacturing. Lynchburg (20,000), on the upper James near the western mountains, is a great tobacco centre, with iron and flour mills. Norfolk (35,000) and Portsmouth a mile off (13,000) are really one city, with a large but shallow harbor at the mouth of the James on the south bank,—the best theoretical location in America, at the entrance to Chesapeake Bay; and its failure to become the greatest city of the northern South, instead of Baltimore, has disappointed several generations of prophets. Alexandria (14,000) is opposite Washington. Singularly, the rich Valley of Virginia has never developed a trade centre of any

¹ The first Virginian settlement, subsequently destroyed and abandoned.

size: the chief places are Staunton (7000) in the south and Winchester (5000) in the north. Roanoke (16,000), in the southwest, is an important iron and industrial centre. Danville (10,000) is a growing tobacco market on a branch of the Roanoke, close to North Carolina. The University of Virginia is in Charlottesville, near the Blue Ridge.

Virginia was the oldest, largest, richest, and most populous of the colonies, and her indispensable help in schemes for the common good had often to be purchased by the concession of a virtual primacy; the more as her great landed slave-holding Episcopalian aristocracy disliked the trading democratic Puritan yeomanry of New England, were jealous of their leadership in political advancement, and were afraid their turbulent republicanism would lead to schemes for independence which were avoided till the last moment. Virginian society was thoroughly English in structure, with "county families" and tenantry and the English Church predominant and intolerant; and despite some of the worst royal governors who ever lived, the royal government was patriotically esteemed. But slave-holding planters, made stern and vigorous despots by the prime necessities of their position, were even less inclined to be themselves enslaved and ruined than Northern traders: the Virginian lawyer Patrick Henry was the most fervid and inspiring of Revolutionary orators, and George Washington, a Virginia planter of distinction in the French and Indian War, was commander of the Revolutionary armies and the nation's first president. Virginia's position in the slave system was peculiar: it was the fountain-head of slaves (of every admixture of white blood to the vanishing point of color) destined to future work in the cotton and sugar-cane fields of States farther south. Of all shades, there are now some 700,000, or two-fifths of the total population. The costly glory of having its capital that of the Confederacy made it the central battle-ground of the War, and left it one vast graveyard and ruined and ravaged beyond any other section. Since the re-establishment of peace, however, there has been a steady advance in material prosperity. The mountain counties of the west, always jealous of the plains and cities of the east, and from their nature but little affected by slavery, refused to obey the secession ordinance of the State, and organized an administration for themselves which Congress recognized as the lawful continuance of the State government, admitting the section as the State of West Virginia in 1863, and for a while after the War placing the mother State under the government of its offshoot.

West Virginia. — This State, for whose genesis see *Virginia*, its 24,780 square miles having been taken from that State's historic limits, — probably the last which will ever be cut from any of the original thirteen, — is an oblong mass with two curious extensions north and east: on the west the "pan-handle" between the Pennsylvania line and the Ohio River, on the east a section along the Potomac giving it the entire northern end of the Valley of Virginia. It belongs in its natural relations and business future to the Ohio Valley group of States, and looks to Mississippi rather than the Atlantic seaboard as its outlet. Its eastern portion lying on the Alleghanies, the surface slopes down to the great valley, and all the considerable streams — the Big Sandy (its Kentucky boundary), Great Kanawha, Little Kanawha, Monongahela, etc. — drain to that river, which forms its entire Ohio boundary. These and a few others are to a slight extent navigable, but valuable chiefly for their splendid water-power and to build railroads along. The Great Kanawha, the largest of them, is 450 miles long and navigable for 100.

West Virginia is a second Pennsylvania, with a somewhat milder climate, in its exhaustless stores of mineral riches (including coal, iron, petroleum and salt); and

with magnificent hard-wood forests yet largely untouched. Mountain and valley are both though not equally fertile; with the elevated valleys or "glades," the "blue-grass" valleys of the southeast, and the garden-like "pan-handle," enriched with 43 inches of annual rainfall. From the unsuitability of its soil for great plantations worked by slave-gangs, only 33,000 or so of its 762,794 people are colored, and the same reason explains its existence as a State; and only some 20,000 were of foreign birth.

The only large town in the State is Wheeling on the Ohio, in the "pan-handle" (which, however, is the most important place on the entire river except Pittsburgh, Cincinnati, and Louisville) containing 35,000 people. It is a smaller Pittsburgh, of foundries and forges and machine-shops and glass-works, and the hills above it are full of coal. It was the capital from 1875 to 1885, when the seat of government was removed to Charleston on the Great Kanawha, which had previously possessed it. This village (6700) is, next to Syracuse, in New York, the greatest salt-producing place in America, from springs close by. Parkersburg (8500) on the Ohio at the mouth of the little Kanawha, and Martinsburg (7500) in the Valley of Virginia, are two other places of steady importance; Charlestown near the latter is the place where John Brown was hanged. Huntington grew from 3174 in 1880 to 10,108 in 1890. But for a brief season in the summer, one of its mineral springs in the mountains, White Sulphur Springs, eclipses them all.

North Carolina. — The surface of this State of 52,250 square miles is the same as that of Virginia, between which and South Carolina it lies; mountains and the great valley in the west, terraces of upland in the centre, flat sandy levels and marshes for many miles back from the coast. A chain of the Alleghanies known variously as the Great Smoky, Unaka, Bald, Iron, and Stone Mountains divides it from Tennessee; but the Blue Ridge from five to six thousand feet in height is here the main range, and the valley between is from three to four thousand, crossed and ribbed by transverse ridges, — Balsam, New-found, Cowse, etc., — and scattered peaks of a group called the Black Mountains from their heavy dark forests, which are the culminating points of the whole Appalachian-Alleghany system, a dozen peaks rising above Mount Washington in New Hampshire. Clingman's Peak (6707 feet) is the highest elevation east of the Mississippi; then follow Guyot's, otherwise Mitchell's or the Black Dome (6688), Hairy Bear (6681), Balsam Cone (6671), Black Brother (6619), Cat-tail Peak (6611), Mount Buckley (6599).

The country thence to the coast is drained by eight considerable rivers, five of which empty within the State and three in South Carolina. The former are first from the north the Chowan, 225 miles long including the Nottaway, navigable for 50. Second, the Roanoke, of 330 miles including the Dan, navigable 130. Both these rise in Virginia and discharge into Albemarle Sound. Third, the Tar, ending in an estuary called the Pamlico, opening into Pamlico Sound; 220 miles long and navigable for 100. Fourth, the Neuse, 300 miles long and navigable for 120, emptying into the same sound by an estuary 30 miles long and three or four wide. Fifth, the Cape Fear, the largest of the five, 380 miles long and navigable for 130, emptying into the ocean to the south. The other three are the Yadkin, the Catawba, and the Broad, taking new names in South Carolina as Great Pedee, Wateree, and Congaree. From the western slope of the Blue Ridge flow the French Broad, the Tuckasegee, and the Hiawasse, which pierce the Great Smoky and Unaka Mountains and flow through gorges of magnificent grandeur to feed the Tennessee.

The northern coast is fringed by outlying sand-spits in three great curves, terminating in angles at Capes Hatteras, Lookout, and Fear, dreaded by mariners for their attendant shoals and furious storms; Cape Hatteras is perhaps the most dangerous point on the North American coast. Lying close to the shore in their southern course, in the north they lie far out, leaving between them and the inner coast a broad, shallow, quiet, nearly tideless sound, about 150 miles long. The southern and by far the greater section of this immense lagoon, 75 miles long by 25 wide, is called Pamlico Sound; the middle one, short but running deep into the land, Albemarle Sound, — the latter communicating, by a canal through the Dismal Swamp, with Norfolk in Virginia; the northernmost, Cunituck Sound. Breaches in the sand-bar allow communication with the sea.

North Carolina is semi-tropic, the first State with a radically different character of production from its northern fellows: here first we see the snowy balls of the cotton-plant, with the negro pickers not now under the lash of the overseer, — 567,000 of its $1\frac{1}{2}$ million are colored, and it was of course a member of the Confederacy, — and the alternately flooded and drained trenches of the rice-field. But its belt of pitch-pine forests gives its inland natives the nickname of "tar-heels," for in turpentine, rosin, tar, and pitch no other State approaches it. The mountains are an almost untouched hard-wood forest; gold, zinc, and mica are taken from their recesses: but their mean annual temperature of 50° makes them a valued sanatorium, and Asheville (10,500) is becoming a prominent tourist centre.

No other considerable State except Mississippi is so utterly destitute of considerable centres of trade. With 1,617,947 inhabitants, its largest city is Wilmington near the mouth of the Cape Fear, with 20,000 (a port of some commerce and with turpentine and other manufactures); and the other leading points are New-Berne (7800) at the head of the Neuse estuary, and the inland towns of Raleigh, the capital (12,800), and Charlotte (11,500), near South Carolina. Winston has 8000.

Formerly the district of "Albemarle" in the province of "Carolina," it took its present name and separate existence in 1729. In no colony were the "loyalists" more active and bitter, and the Revolution as in South Carolina was almost a civil war; yet it was one of the earliest and most spirited in resistance, the famous "declaration of independence" by the citizens of Mecklenburg County antedating the memorable signatures of 1776 by over a year. Its lack of populous centres has made it figure slenderly in our history since the Revolution; Buncombe County has enriched the political vocabulary with one of its most useful terms; and three Presidents were born in the State, all from the Scotch-Irish stock which formed a large part of the early immigration, — there is almost none at present, only 3742 being of foreign birth in 1880.

South Carolina. — "The Carolinas," formerly one politically, are one by nature, but the westward sweep of the mountain-range gives the southern member less high land and more plain and swamp. It is substantially a triangle of 30,570 square miles, with its base on the ocean, and its sides between North Carolina and Georgia, the Savannah river being its limit all the way along the latter. Except for the bounding wall of the diminishing Blue Ridge in the north-west, where Table Mountain rises to 4000 feet, it lies wholly to the east of the system: a well wooded upland, a belt of sand-hills, and then for 100 miles to the coast a plain of sand, 6 million acres of "pine-barrens," and endless swamps often practically impenetrable, along the streams and coast, which in the southern two-thirds is a line of estuaries, and of bayous and

shallow sounds connecting them and cutting off considerable islands famed for "sea-island cotton."

Excluding the Savannah, whose chief affluents are from Georgia, the State has three main districts of river drainage. The central one includes nearly all the north-western third and the upland district: the Saluda and the Broad, of 200 and 220 miles length, rise in the Blue Ridge, unite at Columbia (the capital) to form the Congaree, the united stream being navigable to the confluence; 50 miles south it meets on the east the Wateree (known in its upper course as the Catawba), nearly 300 miles long and navigable for 200, and as the Santee the confluent stream flows 150 miles to the ocean. The north-eastern section is the basin of the Great Pedee and its tributaries: the main river is the Yadkin of North Carolina, 350 miles long and navigable



SOUTHERN SCENES. — A STEAMBOAT LANDING.

150 to Cheraw; it receives Lynch's Creek from the west and the Little Pedee and Waccamaw from the east, each about 150 miles long, and curving sharply southward, enters the inlet of Winyaw Bay close to the mouth of the Santee. The third is the southern corner, a triangle between the Savannah and the Edisto. The latter is its main drainage channel, and is about 200 miles long and slightly navigable, ending in two arms around Edisto Island, the great home of sea-island cotton; the west is drained by the Combahee, the Coosawhatchie, and the New.

This semi-tropic State is the chief rice-field of the Union, producing nearly as much as all others together, owing to its hot climate and its swamps; its yield of cotton is the greatest of all in proportion to its area; it is second only to North Carolina in naval stores from the pitch-pine belt; it was formerly a great indigo district; figs and pomegranates do well. We are evidently moving toward the equator, though the district around Aiken near Georgia is a valued sanatorium for its pure dry air; and almost every foot of its soil being pre-eminently fitted for the slave system

and the products which slave labor could profitably raise, it had the most enormous relative slave population of all States in the Union. Blacks outnumber whites by more than half,—692,503 in 1889, against 458,454 white. Mississippi was very close to it, and the two are the only States in which, and curiously in about the same proportions; the colored race outnumber the whites. Naturally South Carolina was the fiercest champion of slavery and "State rights;" it led the "nullification" movement of 1832, was the first to secede from the Union, and opened the Civil War by firing on Fort Sumter, commanding the harbor of Charleston, its great seaport.

Charleston, for over a century one of the foremost seats of Southern life, thought and action, lies on a fine harbor between two broad estuaries of insignificant streams; it has a continental commerce and 55,000 people. Founded in 1677, the British were warded off in 1776 by a fortification of palmetto logs on Sullivan's Island, a mile beyond Fort Sumter, but captured it in 1780. In 1863 the Union forces began a campaign to retake Fort Sumter, which lasted till the end of the war,—the old stone fortress, a death-trap to its inmates while the walls stood, becoming perfectly impregnable as soon as the cannon had made it a heap of ruins incapable of further damage. More than half the inhabitants of this city, as of the State, are colored; it was a great slave mart, the most intense stronghold of the slave power except New Orleans. The only other place of any size is Columbia (15,000), the capital, at the junction of the Congaree and Wateree; Georgetown on Winyaw Bay, and Beaufort and Port Royal on a maze of islets at the mouth of the Combahee, have some commerce, and the railroad centre of Spartanburg near North Carolina will develop.

South Carolina was always a Colony and State of singular vigor, courage, and able leadership, and foremost in action in every period; in some respects the intellectual leader of the South,—perhaps more than incidentally connected with the strong Huguenot colonization which came in early and helped make Charleston. Her part in the Revolution was not only important, but is the only one still rich with romance and legend. With her it was almost a civil war, for her "Tory" population was numerous and furiously rancorous, fought in large numbers in the British armies, and plundered and outraged the patriot section at every chance—not wanting for provocation or retaliation. She was overrun by the main Southern British corps, and often at the last gasp; but in her swamp fastnesses a remarkable band of guerilla chieftains—headed by the famous Francis Marion, the "Swamp Fox," an American Hereward with better recorders—kept up a warfare which went far to determine the final result, and in no State were there examples of nobler individual devotion of person and fortune.

Georgia.—Since the partition of Virginia, this last of the old thirteen States is the largest one east of the great river. Its surface is a repetition of its two predecessors: the northern portion parallel divisions of the Blue Ridge (the highest summits about 3000 feet), with beautiful and fertile valleys between; then two plateaus, parallel to the mountains, the second lower and sandier and with the belt of "pine-barrens" closing it; and lastly 60 miles of swampy coast land (including one swamp, the Okefinokee, 180 square miles in extent, reaches into Florida, and a wilderness of jungle, marsh forest, ponds, and alligators), ending in a line of sea islands with shallow lagoons and broad inlets behind, making a valuable line of coast communication.

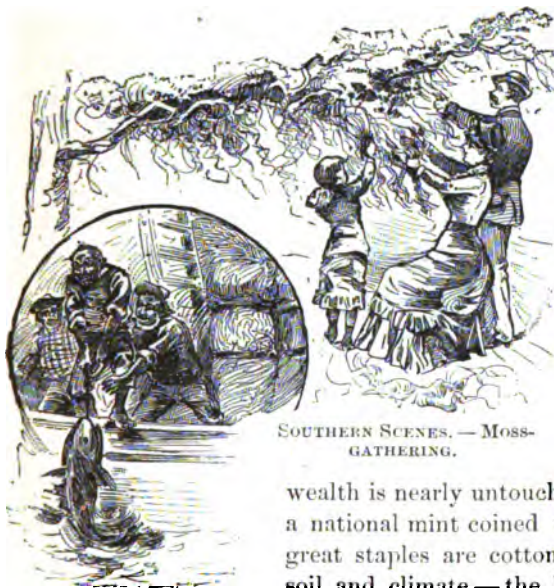
It is a connecting link between the Atlantic and the Gulf States, part of its drainage being to each. The chief Atlantic streams are five, all ending in short

inlets or estuaries, and all but the last roughly parallel, with south-eastward courses. The northernmost, the Savannah, forming the entire South Carolina boundary, rises in North Carolina and runs a pretty straight course of 500 miles, navigable for steamers to the falls at Augusta, 230 miles up; the Ogeechee is 260 miles, with a tributary of 150, — the Cannouchee, nearly as large as itself; the Altamaha under that name is 120 and navigable its whole length, but is formed of two great branches, the Oconee and the Ocmulgee, each about 280; the Satilla, with a course like the letter Z, is 220; and the St. Mary's, the boundary with Florida, running every way but westward, is 175. The last two are lowland rivers entirely; and the St. Mary's rises at the southern edge of the Okefinokee swamp, in the western part of which rises the Little Suwanee, which in Florida joins the Georgian Allapaha, 180 miles long, to form the Suwanee flowing to the Gulf, being also re-enforced by the Georgian Withlacoochee. West of this maze of

creeks is another set making up the Ocklockonnee; and farther west are two much greater streams, the Flint and Chattahoochee, whose junction forming the Appalachianicola is the south-west corner of the State, — the first 400 miles long and navigable 150 to Albany, the second 500 and navigable 300 to Columbus. The latter is the greatest of Georgian streams.

Half the State is forest, and naval stores are obtained from the pine-belt. Its great mineral

SOUTHERN SCENES. — MOSS-GATHERING.



wealth is nearly untouched except for gold; for many years a national mint coined the latter at Dahlonega. Georgia's great staples are cotton, rice, and maize, though its varied soil and climate — the latter hot and malarious along the coast, warm but healthful and equable in the central pine-

wood plateau, cool and refreshing in the mountains — give it immense variety of production, from north temperate to tropic, from wheat to sugar-cane. The coast region is nearly tropic in culture: it grows oranges, bananas, lemons, and olives. Georgia is also the great peanut State of the Union (the local name is "goobers" and the rural population sometimes derided as "goober-grabblers"), and its product fills Northern cities with sidewalk "peanut stands." Manufactures are developing rapidly; nearly all the rivers furnish fine water-powers down to and at the beginning of the central plateau.

The largest city of Georgia is also the capital, — which is the case in only a half-dozen other States, — namely, Atlanta in the north-west, on the water-shed of the Chattahoochee and the Atlantic rivers; one of the four great manufacturing centres of the State, and one of the greatest centres of new capital, energy, and ideas in the South; its population is now 65,500. Augusta (33,000), "the Lowell of the South," at the falls of the Savannah, and Columbus (17,000) on the Chattahoochee and the border of Alabama, are two of the other chief manufacturing places; and

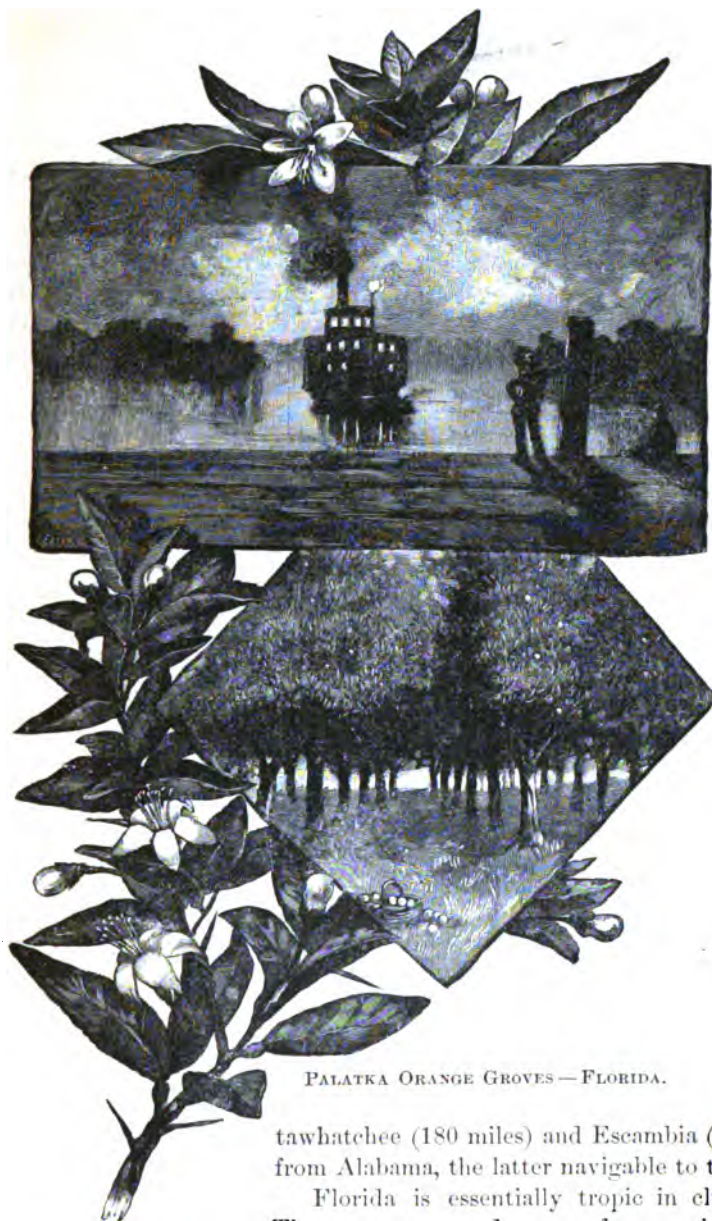
Macon (22,700), on the Ocmulgee, is of growing importance. The great seaport of the State is Savannah (43,000), founded in 1733 by Oglethorpe; it is on the river of its name 18 miles from the ocean, with one of the best harbors in the South, is the second cotton port in the Union, and has a great general commerce. Athens (8700) is a prosperous manufacturing village on the upper Oconee.

Georgia was colonized in 1733 under the leadership of General James Oglethorpe, as an asylum for debtors (then liable to lifelong imprisonment) and refugees from religious persecution; and it received a strong impetus from the early Methodist movement, the Wesleys and George Whitefield being greatly interested in it, and the last visiting it. The State was among the earliest to secede in 1861, and was the very first to regain prosperity and local control of its State government after the war; and its new business development outstripped that of any other Southern State. Its population is 1,837,353, of whom some 864,000 are colored.

Florida. — The eastern coast of the United States ends on the south in a peninsula of sand and marsh some 300 miles long by 100 wide, lying on a coral foundation whose southern extremity is the bounding wall of the Gulf Stream, and which is silted up at the end into a swarm of islets or "keys" (Spanish *cayo*, island) waiting for the ages to fill up the shallow surrounding waters and connect them with the mainland, if land it can be called. For this peninsula, at least in its southern part, is land in the making. Almost everywhere the water lies close below the surface, which is dotted with springs even 1500 feet in depth; sometimes fresh, sometimes salt, limy, or sulphurous. As the soil is a mere surface deposit with no volcanic upheaval, there are no mountains, and it is nowhere more than 200 feet above the sea. The centre is a series of low sand terraces declining each way from a summit level about 200 miles from the southern extremity, with countless lakes and swamps at their bases; there are "pine-barrens" on the higher ones, "prairies of crab-grass," and fertile "hummocks" (timbered hillocks, or islands of solid ground in the marshes); and the basins of the draining streams are mostly marshy jungles of cane-brake and vines and tropical trees. The southernmost portion is the remarkable "Everglades," a district 160 miles long by 60 wide, of 3600 square miles, neither land nor water: overflowed marsh hidden by tall grass, and thickly dotted with dry "hummocks" from a size just large enough to stand upon up to a square mile or more, covered by a jungle of vines and shrubs, pine and palmetto, — the eastern part being a maze of these islands and of shallow bayous; and in the north a lake 650 square miles in extent, — Okeechobee, 40 miles long by 25 wide, and 25 feet above the sea. A bordering rim of sand about 25 miles in width divides it from an eastern inlet of the Atlantic, and a proposed canal would drain off its waters and the Everglades, and open many millions of acres to cultivation.

The State of Florida consists of this peninsula and the "keys," and also of a western strip 50 miles wide along the Gulf to the Pedido River, dividing it from Alabama's Gulf coast; the area of the whole 58,680 square miles. The Atlantic coast except in the extreme north is almost harborless, a line of narrow sand-spits with inner lagoons; but the Gulf coast, otherwise much like the Atlantic, is pierced by many deep bays, — Pensacola, Santa Rosa, St. Andrew's, St. George's, Appalachee, Tampa, and Hillsboro, Charlotte Harbor, Oyster, Ponce de Leon, etc.

The great river of Florida is the St. John's, rising in Cypress Swamp just north of the Everglades, and flowing north parallel with the ocean, threaded on a series of lakes, till at 150 miles from its mouth it becomes a mile wide; and in its lower course



PALATKA ORANGE GROVES — FLORIDA.

tawhatchee (180 miles) and Escambia (250 with the Conecuh) from Alabama, the latter navigable to the Conecuh.

Florida is essentially tropic in climate and production.

The seasons are a dry one of some eight months and a wet one of four; winter is ordinarily represented only by chilliness of the rains in mid-season, though there have been sharp frosts, and the tropic heat of summer is tempered by the warm vapors which cross its narrow surface and give it a heavy rainfall, overflowing each season the low pasture-grounds north of the Everglades, and making the swamps perennial. Florida is the grand hospital of Northern consumptives, and the favorite winter residence (especially the dry pine levels) of all those who find the raw east winds and severe changeable winters of the North unbearable; this large immigration of a rich and cultured class is

six or seven, a miniature Amazon in size and character and the nature of the country; pleasure steamers navigate it 250 miles, and the tributary swamp rivers several hundred more; its total course is 350. The Kissimmee, flowing into Lake Okeechobee from Kissimmee Lake, is also a favorite of tourists and sportsmen, who are greatly enriching the State, and are not deterred by the alligators in all its waters, the poisonous serpents in the jungles, and the sharks along the coast. The leading streams of the west are the Suwanee and the great Appalachian from Georgia, — the latter 90 miles long with a course of nearly 600 through the Chattahoochee, — and the Choc-

having a considerable influence on the social, political, and business development of the State. In production it is affiliated to the West Indies and South America. Its trees are many of them entirely peculiar to itself in the United States,—the wild orange, cocoanut, and Indian almond, the mahogany, satinwood, and manchineel, the cachibou and kino-gum trees, and many others. It is the only orange growing section in the Union (to any amount); this crop is its best known specialty, and the central portion is rapidly filling with orange groves. Pine-apples, bananas, pomegranates, and guavas, lemons, and limes, figs and olives, are also grown. Of field crops, rice, cotton, and sugar-cane are the chief; but the raising of early vegetables and berries for the Northern market is rapidly assuming a leading place. Among its other peculiar contributions to commerce are green turtles, sponges, and alligator leather, and palmetto hats and braids; and it is not insignificant in ship-timber (from the live-oak), naval stores, etc.

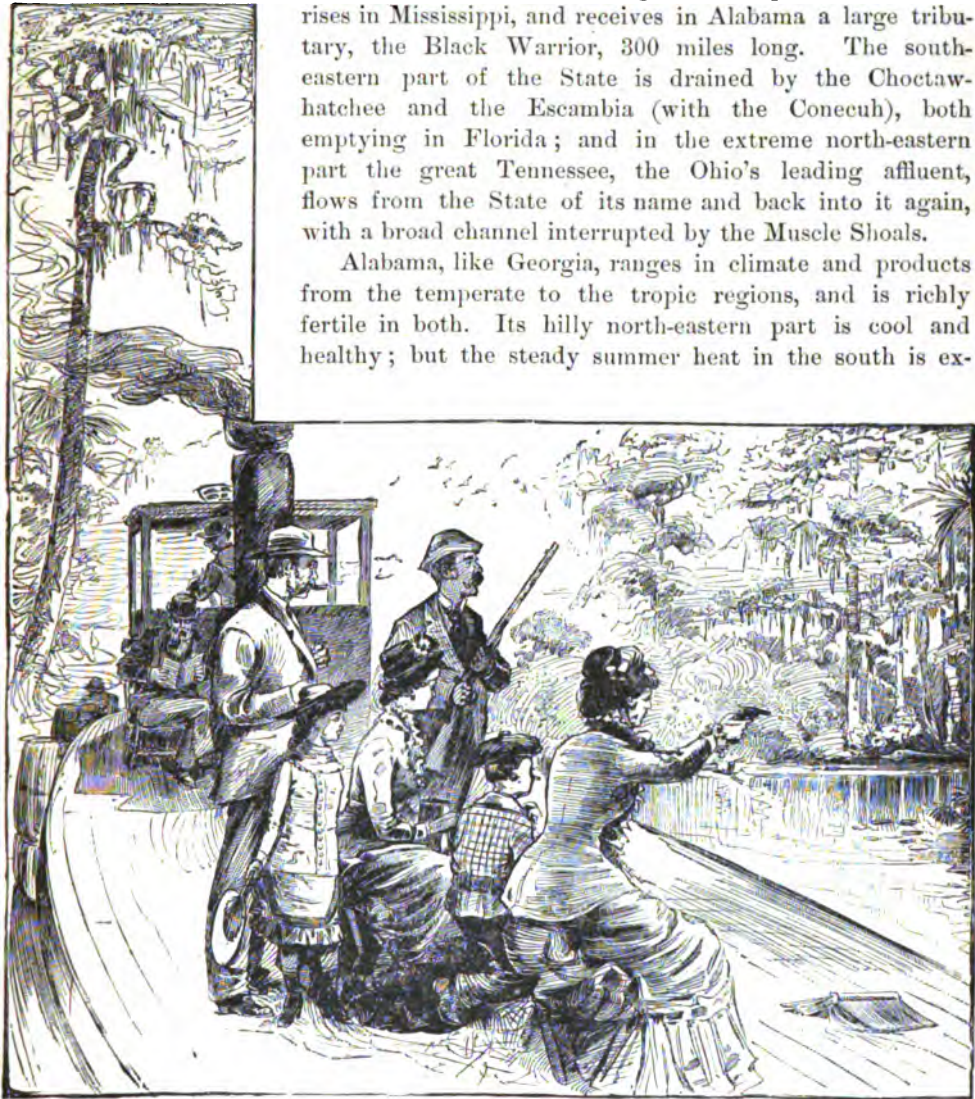
There are no large cities. The commercial head of the mainland is Jacksonville near the mouth of the St. John's (17,000), an important tourist rendezvous; and the next largest is Pensacola (11,750) at the opposite end of the northern arm, on the bay of its name, a lumber centre. Tallahassee, the capital (3500), is about midway between the two; Fernandina (3000) is at the mouth of the St. Mary's; and St. Augustine (4500), on Matanzas Inlet of the Atlantic, is the oldest town in the United States (founded in 1565 by the Spaniards after the massacre of a Huguenot colony just planted there), and a popular summer resort. Key West (*cayo hueso*, Lone island) is a government naval station and tobacco-manufacturing place of 18,000. Palatka, 60 miles up the St. John's from Jacksonville, is of importance as a tourist rendezvous and supply station; and Enterprise in the centre is a growing orange market.

This State is modern as a really settled district, though the scene of several disastrous attempts by the Spaniards—Ponce de Leon searching for the Fountain of Youth, Narvaez, and De Soto—to penetrate into North America, and occupied over three centuries. After changes of ownership, it was occupied by the United States in the War of 1812 (being then known as "East Florida"), and a few years later extorted from Spain, was organized as a Territory in 1822, and admitted as a State in 1845. The war with the Seminoles—a powerful tribe of Creek Indians, who retreated into the inaccessible Everglades, and fought till they were nearly destroyed—lasted from 1835 to 1843, when the remnant of the latter were shipped West. The State was one of the Confederacy. Its population is 391,422, of whom 166,700 are colored.

Alabama.—This State is physically a continuation and counterpart of Georgia, from which the declining ridges of the Alleghanies enter it on the northeast, sink to hills, and disappear in the centre, succeeded by a great rolling upland plain, and then the great belt of level coast lowland which extends around the southern United States from 50 to 100 miles inland, including of course great tracts of pine-land. The sea-line is short and valueless except for the inlet of Mobile Bay, which extends 36 miles in, with 8 to 18 of breadth; it is too shallow for large vessels, but an artificial channel has given it a large commerce, much increased by its being the outlet of the two great rivers of the State, the Alabama on the east and the Tombigbee on the west, through a united channel 45 miles long called the Mobile River, none of them ever closed by ice. The Alabama is a powerful stream, with 800 miles of course from its remotest springs. It is formed, 300 miles from its mouth, by the junction of the

Coosa from the north and the Tallapoosa from the east, up to which it is navigable: the former 350 miles long from its own formation by the union of the Etowah (150 miles) and the Oostenaula, the latter 250 miles long, and all rising in Georgia. The Tombigbee is 500 miles long and navigable for 350; it rises in Mississippi, and receives in Alabama a large tributary, the Black Warrior, 300 miles long. The south-eastern part of the State is drained by the Choctaw-hatchee and the Escambia (with the Conecuh), both emptying in Florida; and in the extreme north-eastern part the great Tennessee, the Ohio's leading affluent, flows from the State of its name and back into it again, with a broad channel interrupted by the Muscle Shoals.

Alabama, like Georgia, ranges in climate and products from the temperate to the tropic regions, and is richly fertile in both. Its hilly north-eastern part is cool and healthy; but the steady summer heat in the south is ex-



SOUTHERN SCENES. — ALLIGATOR SHOOTING.

tremely oppressive, and the coast and Tennessee River lowlands are malarious. It is a prominent cotton State, with tobacco and rice as secondary specialties outside of cereals. Its mineral wealth is very considerable in the northern mountains; recently the extremely rich iron and coal deposits, lying close together, have excited a sudden eagerness for their development, reminding one of the California gold fever, and the section bids fair to rival Pennsylvania itself as a country of forges and rolling-mills,

revolutionizing the whole character of business and population in northern Alabama; its yearly output of iron ore is already somewhat above that of Pennsylvania, and the State now stands second to Michigan alone in this production, while in 1880 it ranked seventh. As yet, however, the chief occupation among its 1,513,017 inhabitants is agriculture. The recollection of its being a slave and Confederate State is kept alive by nearly one-half its population being colored; about 10,000 only are of foreign birth.

The commercial head of Alabama is Mobile on the bay (31,000), founded by the French in 1711, — the oldest settlement in the State; a cotton port of great importance, with a harbor dredged out to 21 feet in depth. Montgomery (22,000), the capital (the first capital of the Southern Confederacy), is on the Alabama ten miles below the junction; Selma (8000) is a cotton centre and manufacturing place lower down the same river; Huntsville (8000) is the emporium of the section north of the Tennessee, and a sanatorium of some note. Birmingham is the headquarters of the iron "boom," and looked upon hopefully as a second Pittsburgh *in posse*; it had 3086 inhabitants in 1880, and in 1890, 26,178. Anniston is another new iron-centre, with some 10,000 people; since 1887, Florence (6000) has developed from a quiet, sleepy village to a busy manufacturing city; Sheffield (3000), founded in 1885, and Bessemer (5000) in 1887, are already among the most important iron towns; and the rapid development of this industry will soon create other seats of trade or vastly increase some that now exist.

Alabama and Mississippi were formed of Spanish "West Florida" and of territory claimed by Georgia and South Carolina. Alabama was set off from Mississippi in 1817 as a Territory, and admitted as a State in 1819.



SOUTHERN SCENES. — INLAND NAVIGATION — DOUBLING.

THE MISSISSIPPI VALLEY AND THE GREAT WEST.

The Mississippi River.—Rising in the great continental water-shed of northern Minnesota, the Father of Waters flows about 1700 miles through a more or less elevated country in which it has cut its channel, sinking to low meadows overflowed at high water; thence for 1300 miles to the Gulf its course is through a bed of its own deposits highest next the channel, moving in deep curves and loops and narrow horse-shoes, and shifting its channel capriciously, now cutting off a vast bend by piercing a narrow neck, now leaving miles of its bed an exposed mud-path and eating into the opposite bank to the ruin of flourishing villages, making new islands and joining old ones to the mainland. In this lower valley its current is always far above the level of its bordering lands, and is only restrained from overflowing many thousands of square miles and seeking the sea through thousands of bayous — as it used to do — by a vast system of levees or dikes hemming it in; which now and then it undermines by seepage through the treacherous quaking alluvium or breaks down by its tremendous weight,¹ deluging the country for great distances and ruining a large percentage of the farmers, besides those swept away with their houses or imprisoned and starved. This silt-made valley begins some thirty miles above the mouth of the Ohio, and includes the lower ends of Missouri and Illinois, and the entire bordering sections of Arkansas and Louisiana, Kentucky, Tennessee, and Mississippi; its area is estimated at 38,600 square miles, and the entire drainage of the river and its affluents at 1,244,000. The mean discharge of the Mississippi is 675,000 cubic feet per second, and the mean width in the lower portion half a mile. Near the Gulf it widens to a mile and a half and enters the sea — through a quaking, impassable, finally half-liquid salt-marsh still “in the making” — by five great mouths or “passes,” of which the middle or South Pass is the greatest; at the entrance into the Gulf it had formed a bar on which the water was but eight feet deep, which it built out into the Gulf about 300 feet every year, and which ruined the river for navigation by ocean-going vessels. One of the most important public works ever carried through in this country was the deepening of this channel to 34 feet by narrowing the South Pass with “jetties” — willow frames loaded with stone — and thus forcing the current to scour out its bottom. This was done in four years (1875–9) by Captain J. B. Eads, and cost \$4,250,000, with a repair allowance of \$100,000 a year for twenty years.

The lower delta is seamed with interlocking bayous or alluvial offsets of the river so thoroughly that they are calculated to take up one-tenth of the surface, and make the entire section virtually a maze of islands in navigable waters.

Mississippi.—Continuous with Alabama, this State of 46,810 square miles is of a notably different character. There are no mountains, the surface nowhere rises above 800 feet, and mineral deposits are scant.

A low ridge along the central meridian divides the drainage to the Mississippi and the Gulf. On the east of this water-shed, through a rolling grassy upland sinking to sandy coast-levels clothed with pine, post-oak, and “black-jack,” flow to the Gulf the Pearl River, 400 crooked miles in length, famous early in the century as the almost inaccessible haunt of pirates; the Pascaguala, 85 miles, formed of the Chickasawha (200) and the Leaf; and the Tombigbee in the north-east corner, debouching in Alabama. The first two empty into a sort of sound formed by a peninsula of Lou-

¹ These breaks in levees are termed *crevasses*.

isiana (whose south-east projection leaves Mississippi but 90 miles of Gulf coast) and detached sandy islands along the coast; one of which, Ship Island, is the only good seaport of the State.

The western half links it to the Mississippi group: it has that river for its western limit, — 350 miles of it lined with dikes, — and the surface runs to it in parallel latitudinal ridges from the water-shed, ending in bluffs at Vicksburg, and declining on the north to the delta of the Yazoo, the principal interior river of the State, with the sluggish current and amazingly tortuous course, the relatively high banks and sunken valley of all delta streams.



MENDING A MISSISSIPPI CREVASSE.

It is 280 miles long under that name, and navigable its whole length; it is formed of the Tallahatchee and the Yalabusha, — the former the main stream, 240 miles long and navigable for 100, — and receives from the north-west the Sunflower, 200 miles long. The Big Black is 250 miles in length.

The State is heavily timbered: the north-western delta section is largely a dense swampy forest, the belt of "flat woods" in the north is nearly untouched, and the pine forests of the south are valued for naval stores. The semi-tropic climate, with a long hot dry season, allows even oranges, pomegranates, figs, lemons, and bananas to be

grown; but cotton is its great staple besides maize for food, and some sugar-cane is raised. Only South Carolina matches it in the large excess of colored over white population, the former being nearly one-half greater than the latter in 1890.

There are no large cities: it resembles North Carolina in the absence of trade centres. With 1,289,600 people, its largest place is Vicksburg (13,000), on low hills above a sharp bend of the Mississippi a mile below the mouth of the Yazoo. Natchez (10,000), lower down the river, — the oldest settlement in the State, founded by Iberville in 1716, — Meridian (10,600), and Jackson the capital (6000), on Pearl River, are the only other notable places.

Mississippi was organized as a Territory in 1798, and admitted as a State in 1817.

Louisiana. — This State of 48,720 square miles monopolizes the last few hundred miles of the Mississippi and its delta, including the jetties in its boundaries; and has on the Gulf a shore so irregular that with an extreme breadth of 298 miles, its coastline is 1256. With some broken country in the north-west, and a line of low but sharply distinct hills beyond the delta, its surface rises nowhere more than 240 feet above the sea, and the greater portion of it is bottom-land, forest, and swamp, lying below the level of the Mississippi and very little above that of the ocean, and kept (not always) from inundation only by hundreds of miles of levees. Vast marshes are frequent (the coast being lined with them), sometimes intersected by high and dry natural causeways called *brûlés*. The pine belt of the southern coast extends entirely across the State; and west of the Red River are extensive grassy plains extending south nearly to the coast, which near the latter and the streams quiver under the feet as though a shell on subterranean water or mud, thence called *prairies tremblantes*.

The internal water communication of the State is elaborate: its lower part is a vast web of paths to the ocean, aggregating 2500 miles. Through its centre flows the great Red River, once with an independent channel to the sea, now merged in the Mississippi: 1200 miles long from its sources in New Mexico, navigable 350 to Shreveport, and for small steamers twice as far; draining 97,500 square miles of territory, and discharging 57,000 cubic feet of water per second; and 20 miles from its mouth receiving from the north the Washita rising in Arkansas, 550 miles long and navigable nearly 300 to Camden, Arkansas. Just at the mouth of the Red River, Atchafalaya Bayou, its old channel, takes part of its waters, and in time of flood a portion of the Mississippi's, to the sea by a course of 220 miles, including Chetimaches Lake, below which it is joined by Bayou Tèche 180 miles in length; some fear that the fickle Mississippi will some time desert its present channel and flow through this, leaving New Orleans to die. The Sabine is 500 miles long and navigable for 400; it rises in Texas, and divides that State from Louisiana much of the way. Near the coast are many salt or brackish "lakes" which are really estuaries or arms of the sea: the greatest of these is Lake Pontchartrain east of the Mississippi, whose eastern section is called Lake Borgne, the latter a wide-mouthed bay connecting with Mississippi Sound and affording a sheltered route from New Orleans to Mobile.

Louisiana's peculiar staple is sugar: it produces nearly all that is made in the United States. The inexhaustible fertility of the soil in a very large portion of the State will always make it attractive to the agriculturist. It is one of the foremost cotton States, and raises rice; and of its 1,118,587 inhabitants, rather more than half are colored, — in 1890 it was 562,893 against 554,712. It can also grow figs, oranges lemons, and limes. Its temperature is less tropic than its latitude would indicate, the vapors from the Gulf — which give it 73 inches of rainfall at New Orleans, against 47 in the north-west — cooling it materially, as well as the north-winds down the great valley; but its summers are fierce and sometimes deadly, and yellow fever has ravaged the State repeatedly with terrible violence.

Louisiana has manufactures of considerable value: sugar and molasses, naval stores, cotton-seed and peanut oil and oil-cake; and its salt industry is enormous, mainly from the mine of pure rock-salt on Petite Anse Island, in a marsh near Vermilion Bay.

Its one large place is the great city of New Orleans, the "Crescent City," the

emporium of the Gulf States and of the lower Mississippi; lying on a narrow curving neck between that river and Lake Pontchartrain, about 100 miles above the delta proper; the first seat of the French attempt to acquire the Mississippi Valley, founded by the Canadian Bienville in 1717, transferred to Spain in 1762 and back to France in 1800, and acquired by the United States as part of the Louisiana Purchase in 1803, when it had but 8000 inhabitants; the scene of the one great land victory of the Americans in the War of 1812. In 1880 it had 216,090 inhabitants; the impetus given to commerce by the jetties is giving it rapid growth, and it has now 242,039. It exports from a third to a half of all the cotton of the country. The native French or "Creole" population is still a leading and characteristic element, and it is the one city north of Mexico which possesses many of the salient features of the cities of southern Europe, both in architecture, inhabitants, and social life, its "Mardi Gras" being individual and not an exotic.

The capital, Baton Rouge (10,500), is higher up the river; and Shreveport (12,000), on the Red River near the Texas line, is the emporium of the northwest.

The extent of the Louisiana Purchase is indicated under *United States*. The "Territory of Orleans," with about the present boundaries, was organized in 1804; and Louisiana was admitted as a State in 1812.

Arkansas.—A block of 53,850 square miles, with the Mississippi alluvium, swamps, and bayous for its eastern border, rising to rolling uplands and the Ozark hills of 1500 and even 3000 feet in the centre, with large grassy prairies on the west and north,—such is this State of 1,128,179 inhabitants, one-fourth colored.

Its navigable interior waters exceed those of any other State. It is evenly divided by the great river whose name it bears. The latter, 1514 miles long,—the longest but one of the affluents of the Mississippi,—rises high in the Colorado Rockies, flows through deep narrow cañons and over a rocky bed till it emerges on the naked, arid prairies of Colorado and Kansas, and turning southward through the Indian Territory—in which it receives the broad, shallow Canadian of 900 miles and the Cinnamon of 650 from the south, and the Neosho of 450 from the north—becomes navigable to its mouth, 650 miles, despite bad shallows at low water; it drains a basin of 189,000 square miles, with a mean discharge of 63,000 cubic feet. Just above its mouth, with a bayou connecting them through the bottom-land, the White River of 800 miles length enters the Mississippi; rising in north-western Arkansas, it flows through southern Missouri and returns to its own State, receives at Jacksonport the Black of 400 miles and becomes navigable for steamers the remaining 300 miles to its mouth. Farther north, the St. Francis of 450 miles comes from Missouri, winds through the delta plains for a long distance nearly parallel to the Mississippi, and enters it just above Helena; the space between the two is a mass of "lakes," cypress swamps, and bayous. The southern half of Arkansas is drained by the Washita of 550 miles feeding the Red in Louisiana.

The soil of Arkansas is richly fertile; its climate varies from malarious heat near the river to cool salubrity in the hills. The leading pursuit of the inhabitants aside from raising their own food is growing cotton; but the State is destined to great importance as the seat of vast and easily worked antimony and manganese mines, much iron and lead, fine marbles, etc. Its oil-stone is famous and not surpassed in the world. Its forests of pine and varied hard-woods are practically untouched, and the sport they furnish, with the hot mineral springs for which the State is noted, are themselves valuable resources.



THE PORT OF NEW ORLEANS.

The only place of any size is the capital, Little Rock, on the Arkansas, with 26,000 people; it lies on the first elevated ground above the mouth of the river. Fort Smith (11,300), on the same river, where it emerges from the Indian Territory, Pine Bluff (10,000), half way from Little Rock to the Mississippi, Helena (5000) on the great river, Camden at the head of navigation on the Washita, and Jacksonport with the same position on the White, are nuclei which may be great in the future.

Arkansas was part of the Louisiana Purchase, was admitted as a Territory in 1819 and as a State in 1836.

Missouri. — The 69,415 square miles which make up this huge block lie almost in the geographical centre of the continent, and in more ways than one it forms a connecting link and a line of demarcation between strikingly different sections. It is strongly Northern and strongly Southern. In climate and production it belongs as distinctly to the Northern United States as its neighbor Arkansas does to the Southern: it has almost as sharp alternation of heat and cold and as raw a winter air as New England, and is predominantly a section of stock and grain raising and dairying, while cotton culture is confined to a narrow strip in the extreme south, — a fact which has had the most important social and political consequences, for of its 2,679,184 present inhabitants only 154,000 are colored, and in 1861 it was kept in the Union by a small military force and furnished several hundred thousand soldiers to the federal army. Yet it was not only a slave State but one of the most intense in bitterness and rigorous in repressive laws, and the last great struggle of the two systems before the Civil War was headed by its politicians in overthrowing the Missouri Compromise and by its inhabitants in the violent usurpation of the Kansas government. Physically also it links the upper to the lower Mississippi Valley: the delta portion of the great river begins at Cape Girardeau in the south-eastern part, below which place the river is leveed and a broad strip of the State is a mass of bayous and cypress-swamps, one of the latter being a hundred miles long and extending far into Arkansas, and the whole of them occupying 3000 square miles. Above this is a line of limestone bluffs along the river reaching back to the hilly broken region of the Ozarks, and continued westward by the great treeless and nearly rainless plains which extend through Kansas to the foot-hills of the Rockies. North of the Missouri it is rolling upland with great stretches of open prairies, but cut by many small streams with wooded valleys and high banks.

Through the heart of the State flows a great artery, the chief tributary of the Mississippi in length and size of drainage basin, though not in volume of waters, and indeed accounted by many the main channel, being far longer than the upper Mississippi itself and discharging more water at their junction, — 120,000 cubic feet per second against 105,000 for its principal. Rising high in the Rocky Mountains of Montana, three primary streams (one of them having its source within two miles of the head-waters of the Columbia and near those of the Colorado) unite at Gallatin City in Montana; the combined torrent flows some 400 miles through a broad valley bordered with lofty mountains, often cutting a passage through magnificent cañons in the rocks or hurling itself over ledges in vast cataracts, and at Fort Benton in Montana, with 2500 miles still to run, becomes navigable for steamboats; receiving the great Yellowstone half a mile wide with a source 1100 miles away, — a sea of liquid mud, — it flows for hundreds of miles diagonally through the lonely open Dakotan plains, receives from the west the Platte through Nebraska and the Kansas from Kansas, and turning eastward divides Missouri, pouring into the clear quiet stream of

the "Father of Waters" an impetuous torrent of mud and uprooted trees from its 2900 miles of course, much of it through caving clay; the alien currents flow side by side for a hundred miles without mingling. It drains a basin of 518,000 square miles. The south-western part of the State is drained by the Osage of 500 miles, 200 of it navigable at high water, and the Gasconade of 300, both emptying into the Missouri near the centre; the eastern by the very long but not powerful Maremac of 800 miles, emptying into the Mississippi below St. Louis; and the south-eastern by the Black, which empties into the White in Arkansas, and by the St. Francis.

Besides its agricultural production, Missouri is a mining State of great importance: a great seat of lead and zinc mining in the United States, — producing more of the latter than any other State of the Union, — and a leading iron district. The manufacturing interests are also large.

The chief place of Missouri is the great city of St. Louis, the queen of the Mississippi Valley and one of the leading business centres of the continent, on the sagaciously chosen site of an old French fort. It lies on three successive terraces and a broad plateau beyond, the first high ground below the mouth of the Missouri, now twenty miles from the heart of the city but rapidly eating away the few miles of alluvium that border the bluffs; and the obstacle of the river has been overcome by an immense bridge, one of the great engineering works of the country. From 10,000 inhabitants fifty years ago, St. Louis has grown to 451,770 now, with a great foreign commerce, vast manufacturing interests (third in the Union, first in the flour industry), and with schools, colleges, and libraries of wide and just repute. As the emporium of the two great basins (and of part of the Ohio Valley and of Illinois), it is destined to be one of the world's great cities.

The only other large cities are both on the Missouri in the extreme west. Kansas City, built in and above a series of ravines at the junction of the Kansas River and the boundary line of the State of that name, has had a growth remarkable even in a country of marvellous developments: from 5500 souls in 1865 it grew to 32,260 in 1870, to 55,785 in 1880, and it has by the census of 1890, 119,668. It is the market of a rich agricultural country and a point of shipment for coal, iron, and lead; manufacturing and pork-packing are its main industries. St. Joseph, higher up the river, is a manufacturing, pork-packing, iron-founding, brick-making city of 52,000 people, rapidly growing. Both these have large brewery interests. Hannibal on the Mississippi, 100 miles (by land) above St. Louis, with 12,800 people, where is another bridge across the great river, is the only other considerable place. Jefferson City, the capital, is a village of some 6700 people.

Tennessee and Kentucky. — These two States are so nearly a physical and climatic and productional and social unity that it is profitless repetition to detail the general characteristics under separate heads. They occupy a piece of country bounded on the south by the 35th parallel, occupying on the east the western ridges and plateaus of the Alleghanies, limited on the north by the tortuous line of the Ohio, and on the west by the Mississippi; a latitudinal line with a "jog" divides this mass nearly in the centre, making Tennessee, the southern half, an extremely long and rather narrow rhomboid — about 500 by 100 miles — of 42,050 square miles, and Kentucky a very irregular mass of 40,400. The Big Sandy affluent of the Ohio determines part of the latter's eastern limit, and the Cumberland ridge the rest, with the valley of Virginia deeply notching the junction of the States. The Mississippi bottom-lands are fat, tropically luxuriant, swampy, full of shallow lakes, and mias-

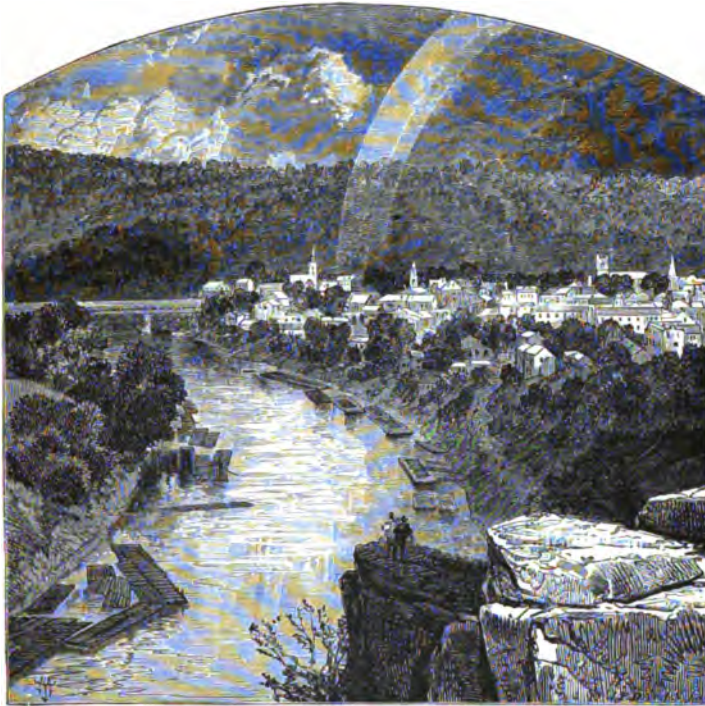
matic; the rest of the country is sufficiently elevated to save it from the tropic heats, and is mild, equable, and salubrious. But even the slight difference in latitude between the two States has changed the political and social equilibrium. Tennessee is a heavy cotton State, Kentucky's cotton crop is insignificant; hence almost a fourth of the former's 1,767,518 people are colored; while Kentucky out of its 1,858,635 inhabitants has only about 273,000 colored, largely in the southern counties.

Tennessee is currently divided into East, Middle, and West Tennessee, names which represent realities; the first is a portion of the Great Appalachian Valley continuous with the Valley of Virginia, with the Unaka or Smoky or Iron or Stone Mountains to the east and the Cumberland plateau on the west; the second a huge basin drained by the Tennessee River; the third a light-soiled plateau ending with the Mississippi bottoms. In all three divisions there are extensive forests which afford a great variety of timber-trees. The eastern section abounds in pine woods; the larch, cypress, and cotton-wood grow in the western, while Middle Tennessee has great forests of red cedar. Kentucky begins in the east with the Cumberlands, here a series of steep narrow parallel valleys with sharp hill-spires nowhere over 3000 feet high; its central basin corresponding to that of Middle Tennessee is the famous "blue-grass" region; the western part is a wooded region once open prairie, and the bottom-lands are thick with densely timbered swamps.

The two leading river systems of this section are those of the wonderful Tennessee and the Cumberland, affluents of the Ohio. The former, the longest river east of the Mississippi except the Ohio, is a geographical curiosity which runs toward all four quarters of the compass, and after flowing three degrees south from its sources, turns north and enters the Ohio almost exactly at the parallel of its beginning, Middle Tennessee and North Alabama lying in the bend of the gigantic horseshoe it forms. Its formation is at Kingston, Tennessee, 800 miles from its embouchure, by the junction of the Clinch and Holston, rising in south-western Virginia, the former of 300, the latter of 350 miles; with navigable waters it flows south-west and west through Alabama, fatally broken by the Muscle shoals, then navigable again for 270 miles to its mouth in a substantially northern course. The Cumberland of 650 miles is a curiously exact copy of the Tennessee in the character of its course: rising in the mountains of eastern Kentucky, running south-west and then west with the same curve through Tennessee which the other makes through Alabama, running almost parallel with its fellow, at one spot within three miles of it, and entering the Ohio but fifteen miles higher up; it is navigable to Nashville, 192 miles, and at high water much farther. Tennessee has no other considerable streams, though the Forked Deer, Big Hatchie, and Obion flowing to the Mississippi are navigable at high water; but the Green of 300 miles and navigable 150, the Kentucky of 350 miles and navigable 60 to Frankfort, and the Licking of 220 emptying opposite Cincinnati, are Kentucky rivers of high importance.

The blue-grass pastures of Kentucky, available all the year round, have made it world-famous for horses and mules and thorough-bred cattle; it is scarcely less noted for tobacco and whiskey, and has large industries of iron, glass, and salt. Tennessee has the same character of agriculture, besides cotton and peanuts and early winter wheat; lumber-sawing and forest products are important; besides iron-smelting, copper and zinc are largely worked; wool-carding and boat-building are industries of some consequence.

Kentucky contains perhaps the most remarkable natural curiosity of the country, the famous Mammoth Cave, in the centre near Green River. It is a very large example of a characteristic formation of limestone districts, the subterranean waters dissolving the stone irregularly and leaving fantastic channels and rock sculptures, huge chambers and narrow flumes, forming deep pools and cascades, and creating pendants and upright shafts; but its immense size and length and the navigable branches of a considerable subterranean stream (Echo River) enable tourists to explore it, and inspect its varied beauties, and its animal and insect life, bred in everlasting darkness and so destitute of organs of sight, is of great scientific interest.



FRANKFORT, KY.

Tennessee's chief city is also its capital — a rare fact in the United States : Nashville on the Cumberland, a handsome and rapidly growing manufacturing city of over 76,000 people (86,000 including suburbs), with a large colored element ; one of the leading Southern cities of wealth, society, and intellect, as well as of business energy, and full of institutions for the higher education, including Fisk University for training colored teachers. Its second is Memphis, now officially termed the "Taxing District of Shelby County : " a place of varied and painful history. It is the foremost city of the Mississippi from St. Louis to New Orleans, and the only good city site from Cairo to Vicksburg : on a bluff sixty feet above the great river, with a natural sandstone wharf, and a depth of water sufficient for the largest ships, never frozen over. For many years it has been the chief cotton port of the central South, and seemed destined to speedy greatness ; but it was terribly ravaged again and again by yellow fever, half depopulated, ruined and bankrupted, and gave up its name and

corporate existence to escape its burdens. The change has been purely beneficial: its municipal government is excellent; sanitary improvements have made recurrence of disaster unlikely, and its prosperity is advancing rapidly. It has about 65,000 inhabitants. Chattanooga in the southeast, the third city, is a very energetic iron and coal centre of 29,000 on the upper Tennessee in a knot of converging hills and valleys of the Cumberland system; and Knoxville (22,500), on the Holston, is the business centre of eastern Tennessee. Jackson (10,000), on the Forked Deer in the west, is a cotton mart of considerable importance.

The one great city of Kentucky is Louisville at the falls of the Ohio, next to Pittsburgh and Cincinnati the largest place on the river, containing about 161,000 people. It lies on a plain twenty-five feet above flood-mark of the river, which makes it an import mart of foreign commerce, and is here spanned by a bridge nearly a mile long. Its manufacturing is even more important than its commerce: iron-founding, the making of iron pipe and ploughs, and tanning are the chief elements. Covington (37,000) and Newport (25,000) are suburbs of Cincinnati on the two sides of the Licking River at its mouth. Lexington (22,000), formerly the capital of the State, is the head of the blue-grass region, and the seat of Kentucky University. Frankfort the capital (8000) is a picturesque village on the Kentucky where it cuts a deep channel in limestone walls; Paducah at the mouth of the Tennessee (13,000) has an admirable location and is a cotton and tobacco port; Bowling Green (8000) is at the head of navigation on the Barren River, a branch of the Green.

Kentucky was part of the territory claimed by Virginia, and became a State in 1792; Tennessee, illegally organized from North Carolina as the "State of Franklin" in 1785, became a State in 1796.

Ohio. — This first State of the "great West" to receive the overflow of Eastern emigration (admitted in 1802), and which is consequently still the most Eastern in social structure, was at the last census the fourth in population after New York, Pennsylvania, and Illinois, making almost a tie with the latter; it has now 3,672,316 inhabitants, and its rival about the same. As it had 2,000,000 before the great flood of foreign immigration began, its population is nearly all of old native stock; and less than 100,000 are colored. It has been a sort of New England of the West: the blood and the traditions of the Puritans are both strong in it, the "Western Reserve" of Connecticut in the north-east, largely settled by Connecticut families, was a fountain of anti-slavery teaching and effort, and the State has attained a primacy something like that of Virginia among the colonies, owing to the ability and integrity of its public men.

The western limit of Ohio is arbitrary; Lake Erie and the Ohio River determine it on the north and south, except for the north-west fiercely contested with Michigan, which was bought off with its peninsula on Lake Superior; the river also bounds it on the south-east. Its area is 41,060 square miles. It is a rolling plateau entirely without mountains, and a soil of almost unbroken fertility, much of it equal to any in the world; its climate is violent in extremes of heat and cold, observations at Toledo ranging from 100° in summer to —16° in winter, at Cincinnati (nearly 3° farther south) from 103° to 6°; its annual rainfall averages about 36 inches, and the Great Lakes are oceanic in their fertilizing power. In short, it is a very fertile north temperate district, and rich in production of cereals and fruit, in stock-raising and dairying, and in wool-growing. It is of scarcely less importance in mining, the coal, iron, and oil measures extending into it from Pennsylvania and West Virginia, and



VIEW OF GAMBIER, OHIO.

[This little village, five miles from Mt. Vernon, contains Kenyon College, an important Protestant Episcopal Institution established on this site in 1828.]

the former underlying all eastern Ohio ; its soft coal is in some parts so near the surface that men dig little coal wells in their yards for family supply as they would wells for water ; its iron-founding industry is very great, and the quality of some ores the best in the country, and its resources of petroleum and salt, building and mill stones, fire, pottery, and tile clays, cement, limestone, etc., are of vast importance. It is one of the foremost manufacturing States, over a fourth of its working population being engaged in those industries.

It has no large interior rivers : a low irregular water-shed drains about a third of it to the Lake and the rest to the Ohio by a series of short parallel streams, most of them forming at their embouchures the sites of important places, — the most notable being the Maumee, Sandusky, and Cuyahoga, of the Lake series, and the Great and Little Miami, Scioto, Hocking, and Muskingum of the Ohio series. By themselves and the railroad lines and canals they have determined, they have largely directed the business development of the State.

Ohio is imperial in its rich and populous cities scattered all over the State : no large State in the Union is so thickly dotted with thriving centres. The largest of them is the old border settlement of Cincinnati in the extreme south-west, on the Ohio opposite the mouth of the Licking, in a semi-circular valley of two high terraces shut in by hills at the north. Founded in 1788 and named after the celebrated post-Revolutionary military order, it was for many years a pioneer village in a country ravaged by the Indians, and in 1820 had but 9602 inhabitants ; but with the breaking of Indian power and the vast agricultural development of the surrounding section came sudden greatness. Its most remarkable growth was from 46,338 in 1840 to 115,438 in 1850 ; it nearly doubled again in the next twenty years, and has by the last census 296,908 inhabitants, which Covington and Newport across the river in Kentucky increase to 360,000. Over a fourth of these are foreign-born, some 50,000 being Germans, which element is a conspicuous social and political force in the city (largely massed in the northern section), and has been a determining element in making the city the leader of the West and no mean rival of Boston and New York in musical culture. Cincinnati is indeed no mere aggregation of manufactories and pork-packing establishments and importing houses ; it holds high rank in the intellectual life of the country ; the Cincinnati College is one of the best, and the public library is of national fame.

Next in rank is the great rolling-mill and oil-refining city of Cleveland, on the Lake at the mouth of the Cuyahoga, — with 261,353 inhabitants, — the largest on the Great Lakes except Chicago and Buffalo closely following. It has a spacious and deep natural harbor artificially improved, and crossed by a magnificent drawbridge viaduct 3211 feet long ; its foreign commerce is very large, but its coal, iron, petroleum, lumber, stone, glass, drain-pipe, cement, etc. handling or making are the chief sources of its rapid growth — from 17,034 in 1850. Its educational institutions and libraries are numerous and of high repute. The beauty of its elevated avenues and drives along the Lake is widely celebrated. The schools are liberally supported and capably taught.

The other leading Ohio emporium of the Lake business is Toledo at the western end, built mainly on piles in the swamp at the embouchure of the Maumee into a large sheltered bay. The bone of contention between Ohio and Michigan in 1836, its growth long paralyzed by over-greed of real-estate speculators, so that it had but 3829 inhabitants in 1850, it has now over 81,000, with an immense trade in lumber, flour, and grain (the chief barley mart of America), and heavy manufacturing interests.

Not far to the east on the Lake is Sandusky (18,500), the only other large place on the Ohio shore, on a broad bay of the same name, — an elegant city of large trade and manufacture.

Columbus, the capital and third in size (88,000), is a rapidly growing city on a broad plain pierced by the Scioto, with heavy trade and manufactures, and the seat of the Ohio State University, the State Library, and numerous other notable and noted institutions. Lower down the same river are Chillicothe (11,000), and Portsmouth and its mouth (12,000), a ribbon several miles long with the hills behind. On the Great Miami in the west are Dayton the fifth city (61,000), furnished with water-power by a hydraulic canal from Mad River, and with great volume and diversity of manufactures; and Hamilton (17,500), 25 miles from Cincinnati: while on its tributary, the Mad River, is Springfield (32,000), the seventh city, — all manufacturing cities. The Muskingum system has along it Canton (26,000), Newark (14,000), Zanesville (21,000), and Marietta at its mouth, the oldest settlement in the State. Akron (27,600), noted for drain-tile and cement, and Youngstown on the Mahoning (33,000), a city of rolling mills and sixth in rank, are in the northeast. Mansfield (13,500) is in the north centre. Steubenville (13,000) in the east is the second in size of the Ohio River ports in the State.

Indiana. — Like Ohio, this was cut from the "North-west Territory"; and as a Territory, its limits were the Mississippi to its sources, Lake Superior, and part of Ohio. With its present bounds, including 36,350 square miles, it came into the Union in 1816. It has the southern curve of Lake Michigan, with no good harbors on it; on the south is the Ohio, and its south-western boundary is the Wabash (the chief northern affluent of the Ohio), whose system drains nearly all of Indiana, — the immediate basins of the Wabash and White containing 21,000 square miles. Rising in Ohio, the Wabash has a course of about 550 miles, navigable about 300 from the junction of the Eel at Logansport; it runs north-west to Huntington, west to Logansport, south-west to near Covington, then south and south-west to the Ohio. Its chief tributary is the White, over 300 miles long, formed by two main forks, one running south-west through the heart of the State, the other west. The Maumee in the north-east, debouching in Ohio, formed of the St. Joseph's and the St. Mary's, has some navigable water in Indiana; the Kankakee branch of the Illinois has its rise in the north, and by a trifling portage from its head-waters to a creek feeding the St. Joseph's from Michigan (which makes a bend through northern Indiana), the Indians used to pass from the Mississippi to Lake Michigan. The streams of this State are generally sluggish and shallow, but their valleys are often deep wooded glens of picturesque beauty. The State has no mountains: its surface is undulating upland or broad prairies broken by groves of oak and ash, with sandy tracts, marshes, and lakes in the north. Like all this belt of States, it has a very fertile soil, a violently uneven climate, and a rather heavy rainfall from the Lakes, and a character of production to correspond; and along the southern streams it is apt to be malarious. The coal deposits are large, excellent, and well developed; and the kaolin and fire-brick and pottery clays are of high importance.

The metropolis of Indiana is its capital, Indianapolis on the White River, near the geographical centre of the State; this is one of the cases where a great city has been planned from nothing and the future has justified the selection, it having been laid out in an unbroken forest in 1820, and after a slow development leaping from 18,611 in 1860 to 48,244 in 1870, 75,056 in 1880, and with 105,436 in 1890 with a still

greater future before it. But the site was sagaciously chosen. It is laid out on a great plain, with avenues radiating from a circular central park (originally the governor's residence), and crossed by transverse streets. Being near the centre of the western corn belt, it is an immense market for grain, flour, pork, etc., and it has heavy manufactures.

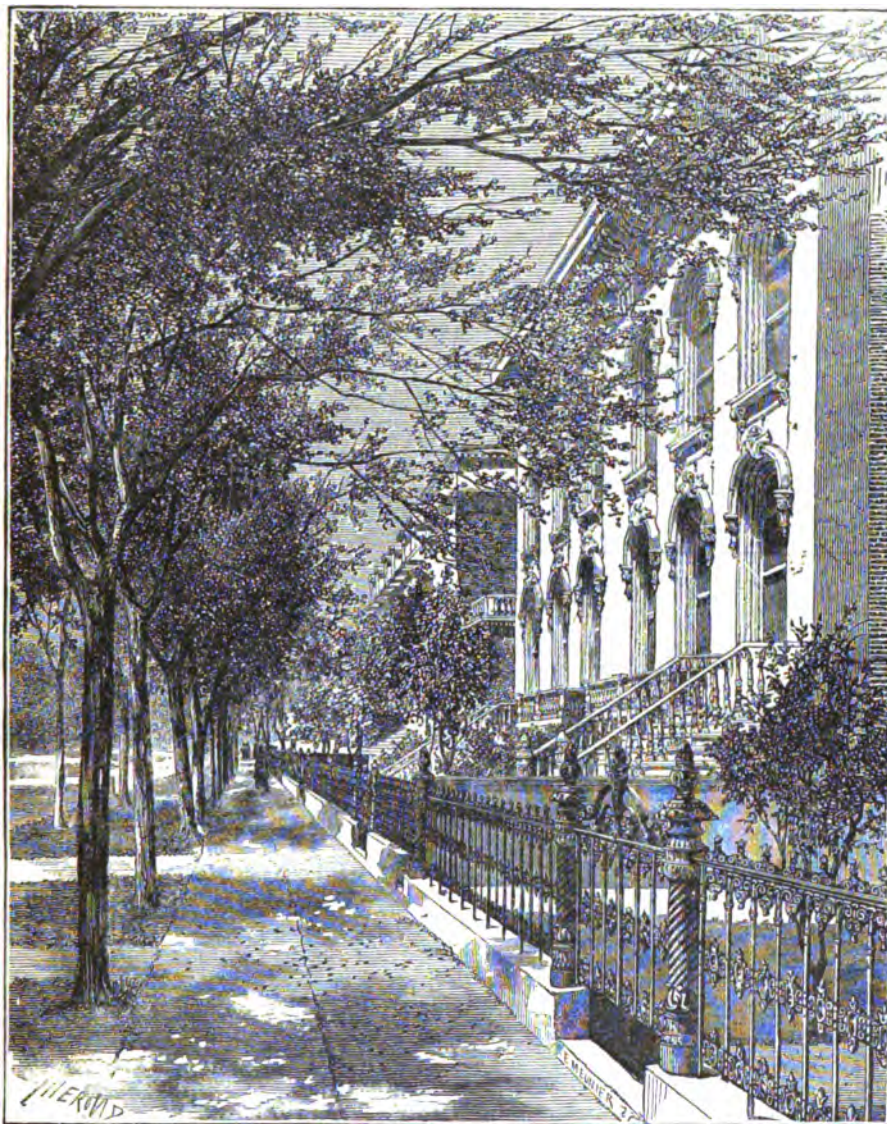
The leading Ohio River port is Evansville, the commercial head of the south-west (50,750), the principal mart for corn, wheat, and pork on the river below Cincinnati; it has a large tobacco trade, is in the midst of easily worked coal-beds, and has extensive and varied manufactures; it contains a great library and art-gallery having a \$500,000 endowment. New Albany (21,000), on the river five miles below Louisville, is a sort of manufacturing suburb to that great city; Jeffersonville (10,700), exactly opposite Louisville, is entirely suburban to it. Madison and Lawrenceburg are smaller places on the river. On high ground above the Wabash near the western border is Terre Haute (30,000), a very handsome and fast growing market and centre of trade and manufactures, near large coal mines; lower down the river is Vincennes (90,000), one of the old French chain of western fortresses; higher up is Lafayette (16,000), of the same character; and at the head of navigation is Logansport (13,000). South Bend on the St. Joseph's, near the old Indian portage, has 22,000. The emporium of the northeast is the great manufacturing and railroad centre of Fort Wayne (35,000); and south of it near the eastern centre is the important point of Richmond (16,600).

The population of Indiana is now 2,192,404, of which about 150,000 are of foreign birth, and over 40,000 are colored.

Illinois. — This imperial State of 56,650 square miles, — about the size of England and nearly as large as all New England; having wrested from Ohio the position of third in population in the Union; stretching north and south 385 miles, from north of the latitude of Boston to that of Hampton Roads, and consequently having a mean temperature 11° higher in the north than in the south; with the greatest of North American rivers washing its whole western side, its greatest affluent bathing the southern end, the best commercial site on the Great Lakes belonging to it in the north-east, a large navigable stream laving its south-eastern side for 200 miles, and another piercing its heart diagonally from side to side, — this favored child of nature is the typical prairie State, the surface consisting almost entirely of a flat or undulating plain, channelled by streams bordered with steep bluffs. One level plain, the Grand Prairie, is over 200 miles in length; and the Great American Bottom, in the south-west between the two great rivers, contains 450 square miles. There is some woodland, increasing as the prairie lands are protected from fires; and there are two ridges, the highest land in the State, — the loftiest, reaching an altitude of 850 feet, running from the Ohio to the Mississippi not many miles above their junction; the other in the north-west, running almost north and south and crossing the upper Illinois just before it turns southward. The climate and agricultural production of the State are like that of Ohio and the others of the central plain; its mining capacities are not so great, though there is coal and iron, — the chief mineral is lead from the north-west.

The Illinois River, the great artery of the State, has played a remarkable part. Its 350 miles of course from the junction of the Des Plaines and Kankakee to the Mississippi are all navigable; the first is about 150 miles long, the second 230; but the former was in Indian days by far the most important, for a portage of only

a mile and a half led from its first waters that could float a canoe to those of the brook called the Chicago River, then flowing to Lake Michigan (the water-shed of the St. Lawrence and Mississippi systems is about a mile west of Chicago),



A VIEW IN CHICAGO.

and this was one of the grand Indian highways from the Mississippi to the Great Lakes. It is worth noting that the site of the leading mart of the West under civilization was one of the best trodden spots in the West before white men set foot on the continent.

The greatest city west of the Alleghanies, and the second in size in America exceeded by imperial New York alone, is Chicago, originally built on a low swampy site around the mouth of the Chicago River, and now spreading many miles along the lake and into the interior, with its streets artificially elevated, and the current of the river reversed to carry the city drainage into the Illinois. First really settled about 1833, and with 4479 inhabitants in 1840, it had 29,963 in 1850, 109,206 in 1860, 298,977 in 1870, and 503,285 in 1880, and has now over a million (1,099,850 by the census), — a nearly incredible growth due partly to the sudden development of the country around and partly to its own transcendent site. It is "the largest primary grain, live-stock, and lumber market in the world," and the distributing point for supplies to the whole central valley of North America. The most destructive fire known to history, starting October 9, 1871, obliterated 2000 acres of its buildings, including the entire business heart of the city, destroying nearly \$200,000,000 worth of property, and rendering a third of the population homeless; but it was rebuilt in far finer style in a wonderfully short time, and the city's prosperity suffered little check. Its intellectual life has not been choked by this great material growth: besides excellent schools and libraries, there is a strong Baptist college, the University of Chicago, with an annex (the Dearborn Observatory), managed by the Chicago Astronomical Society, and having one of the largest telescopes in the country; also a Catholic college, several theological seminaries and professional schools, etc.

The second city in the State is Peoria (41,000), just below a lake-like expansion of the Illinois about midway of its course, and in the midst of rich coal-fields; a flourishing mart of trade, and with heavy manufacturing interests and large distilleries. Joliet, higher up, on the Des Plaines branch, is a city of large manufactures and valuable limestone quarries. The population is enumerated at 23,000. Quincy, on the Mississippi (32,000), the third city in the State, beautifully situated on a high bluff above the river, is a manufacturing centre; Rock Island (13,600), higher up, opposite Davenport in Iowa, with a great bridge across the river from a slender island in the channel which gives its name to the city, is a place of large manufacturing with immense hydraulic power obtained by damming the interior channels; Alton (10,000) is nearly opposite the mouth of the Missouri, and East St. Louis (15,000) is suburban to St. Louis. Springfield, the capital (25,000), is west of the centre on the Sangamon, an unnavigable affluent of the Illinois; Jacksonville (13,000) is between it and the Illinois; it has charitable institutions for the insane, the feeble-minded, the blind, and for deaf mutes, — the last two State charities; Bloomington (20,000) is about in the centre; Galesburg (15,000), between Peoria and the river, with two widely reputed colleges; Aurora (20,000), on the Fox River, about 40 miles west of Chicago; Rockford (23,500), on the Rock River in the centre near the northern border; and Cairo (10,000), at the mouth of the Ohio, the market of lower Illinois, — on a low site formerly overflowed, but now extensively diked, so that the admirably placed city will probably grow rapidly.

Illinois has now 3,826,351 inhabitants; in 1880 nearly one-sixth were of foreign birth, but less than 50,000 colored. The German element is heavy.

Michigan. — Two unequal peninsulas, as different in physical character as if separated by a thousand miles of water instead of by the Strait of Mackinaw, make up the 59,815 square miles of this richly diversified State. The southern (about three-fourths of the whole) is a bullet-shaped body forming nearly the entire eastern shore of Lake Michigan and all the western side of Lake Huron, bordered also by the St.

Clair and the "rivers" which supply and drain it, — the line just falling short of Toledo in Ohio, and as compensation for yielding which it was given the northern peninsula, physically part of Wisconsin, with 300 miles of coast on Lake Superior and half that on Lake Michigan, besides a little on Huron; also with some islands in Superior.

The former has fertile prairies in the south-west, and beautiful natural parks called "oak openings" in the woods; but it is as yet, and has long been, far the greatest lumber-producing district in the Union. When first opened to civilization, its surface was practically one gigantic forest of white pine, sugar-maple, and other deciduous and evergreen trees; and even now, despite the axe of the pioneer and lumberman, the clearings for the homes of its 2,093,889 inhabitants, and the devastation of the steam saw-mills, and despite also of appalling forest fires, — which have raged for weeks over vast regions, blotting out villages, destroying hundreds of lives, making hundreds of square miles a blackened waste, and firing again and again the half-rotted wood and leaves which constitute here the very earth itself for many feet in depth, — the northern portion of the main section is still magnificently forest-clad. Through these woods brawl swift streams drawing bands of sportsmen to fish for trout and grayling, their sources being often in handsome firm-shored lakes of considerable size. From a low central water-shed, the western rivers drain a country growing more and more sandy till the shore of Lake Michigan is bordered with shifting dunes; the eastern reach at Lake Huron a bold rocky shore, pierced by the immense arm of Saginaw Bay and the smaller one of Thunder Bay, matched on the north-west by Grand Traverse and Little Traverse bays. The first two receive Saginaw and Thunder Bay rivers, fair samples of the streams of the State, all short and rapid and but limitedly navigable. Of the eastern streams besides these, the Cheboygan entering the Straits of Mackinaw, the Au Sable between Thunder and Saginaw bays, and the Huron and Raisin flowing to Lake Erie, are the largest; of those debouching in Lake Michigan, the St. Joseph's in the extreme south, bending through Indiana, — once an Indian highway to the Mississippi by a portage to the Kankakee, — is the most considerable, and the Kalamazoo, the Grand, the Muskegon, the Marquette, and the Manistee have all played important parts in business development, and all expand into lake-like estuaries at their mouths.

The northern peninsula is the great copper district of North America, the deposits lying mainly on a large rocky secondary peninsula called Keweenaw, jutting into Lake Superior, 600 feet high in general level and 1200 in spots. The metal is mostly found not as an ore, but in rock-imbedded masses of nearly pure native copper, such as were formed into tools by the aborigines many centuries ago; sometimes it is alloyed with silver. This portion is notable also for beds of the purest and the most refractory iron ore in the country (Michigan's iron product far exceeds even that of Alabama or of Pennsylvania), of peat which is used to smelt it, and of marble. It is in general a rough barren plateau, with a semi-polar climate, raw and bitter with the cold Superior vapors; but its southern side has heavy untouched forests. Its 100,000 people are chiefly miners and their families, one mine employing 2000 men; and its chief places are metal-shipping ports and smelting, rolling, and manufacturing villages. Calumet (12,500) — on Keweenaw near the richest copper mine in the world, which produced in 1882 one-eighth of the world's total product — is the largest; its port is Houghton, on a deep arm of Keweenaw Bay, an inlet of Superior formed by the peninsula. Marquette on the Lake, Ishpeming and Negaunee a few miles

inland, and Escanaba on Lake Michigan at the mouth of Green Bay, are the other principal towns in the north.

The southern peninsula is a rich farming country, with the rigor of the polar winds tempered by the waters of Lake Michigan, the foremost salt and lumber district of the Union, and one of the leading sections in fisheries, — its fish from the cold waters of rivers, ponds, bays, and open lake being of the finest quality, and the freezing, smoking, and pickling of them and the preparation of caviare being a large industry.

Michigan's great city is Detroit, one of the five Lake ports of over 100,000 people, and one of the leading cities of the North-West, and from 1836 to 1850 the capital of the State. It lies on a slope from the Detroit River, here half a mile wide, with Canada on the other shore, and is important in foreign commerce, in the shipment of grain, lumber, and metals, in pork-packing, tanning, manufacturing, etc. One of the old chain of French forts, established in 1701, which withstood a long siege from Pontiac in 1762, it had but 9102 inhabitants as late as 1840; then rising with great leaps, it had 45,019 in 1860, 116,340 in 1880, and has 205,876 now, besides a suburb (Springwells) of 8000.

The greatest development outside Detroit has been through the enormous lumber business on the line of the Saginaw, Grand, and Muskegon, each almost one line of saw-mills. The second city in population is Grand Rapids (60,000), on the Grand in the western part of the State, at the head of steamboat navigation, the village of Grand Haven (5000) being at its mouth; higher up is Lansing the capital (13,000) with the State Agricultural College, and still higher up is Jackson (21,000), the emporium of the southern interior, a place of miscellaneous manufacturing containing the State prison. Fully equal in gross development has been the valley of the Saginaw, with its branches, the Shiawassee and Tittibawassee, and its affluent the Flint. Near the mouth are Bay City (28,000) on one side and West Bay City (13,000) on the other, — really one city, with large salt works; not far up is Saginaw (46,000), consolidated with East Saginaw city in 1890; and on the Flint is the city of Flint (10,000). The best harbor on the eastern shore of Lake Michigan is Muskegon (23,000), at the mouth of the river of its name, and higher up the river is Big Rapids (5000). Manistee at the mouth of its river (13,000) is a lumber port. Between Jackson and Lake Michigan is Kalamazoo (18,000), on the river of its name, a manufacturing city, containing the State insane asylum; and higher up the stream is Battle Creek (13,000). Ann Arbor (9500), between Detroit and Jackson, is made illustrious by Michigan University, one of the foremost educational institutions in the country. Adrian (9000), near the Raisin, is the market of the southeast; Port Huron (13,500) is near the beginning of the St. Clair River, opposite Sarnia in Canada; and Alpena (11,000) is a lumber port at the mouth of Thunder Bay River.

Michigan as a Territory, formed in 1805, included most of the North-West; it was admitted as a State in 1837.

Wisconsin. — Stretching from Illinois to Lake Superior, and from Lake Michigan to the young Mississippi, already a great river, the "Wolverine State" of 56,040 square miles dotted with marshes continues the great fertile rolling plain and prairies northward to the region of Laurentian rock, flinty soil, and sugar-maples; but its streams run often between steep rocky banks and through chiselled "dalles" or cañons in foaming rapids. The highest ground (except isolated elevations in the south-west

called "mounds," rising to 1700 feet) lying near the borders of the Great Lakes, the streams draining to them are short and with one exception inconsiderable, and the leading rivers flow to the Mississippi. The exception is the Fox, one of the most important business streams in the State, with a course of 250 miles passing within a mile and a half of the Wisconsin, with which it is connected by a canal, forming a navigable channel from the Mississippi to Lake Michigan,—a very great Indian way; it passes through Winnebago Lake and discharges into Green Bay. The Menominee and Oconto, about 130 miles long each, also flow into Green Bay. The greatest tributaries of the Mississippi are the St. Croix, a powerful and rapid river rising near the shores of Superior, flowing south for 200 miles and forming for some distance the western boundary of the State, and just before its close expanding into a "lake" 36 miles long by three miles broad; the Chippewa, a branching stream of 300 miles, draining much of the north-western portion; the Black, of 200 miles; and the great Wisconsin of near 600 miles, draining a swarm of lakelets near the shore of Superior, and flowing south and then west through the entire heart of the State. These little lakes—clear rock-bottomed pools in the primeval stone—nest thickly at the northern border; southward they become larger and more scattered, and far the greatest and most important of all is Lake Winnebago near Green Bay, 30 miles long by 11 wide, with an area of 220 square miles; Devil's Lake near the Wisconsin, a loch in a stone basin with neither inlet nor outlet, is the best known of many remnants of the glacial ice sheet; and Horicon Lake, the source of Rock River which feeds the Illinois, is now nothing but a marsh.

The long cold winters are dry and salubrious, and have not prevented a population of 1,686,880 from settling here, including a greater proportion of Germans and Scandinavians than in any other State. Some sections are almost entirely Norse or Swedish, the cities have sometimes almost a preponderance of Germans, and these elements exercise a powerful influence on the politics of the State.

The State is favorable to grain and stock-raising, hops and maple sugar and other north-temperate products, and ranks high as an agricultural district; but it is also a leading lumber and manufacturing section, the grand supply of the timberless Western regions, with some iron and copper mining and good fisheries.

Milwaukee on Lake Michigan, 90 miles north of Chicago, is the business head of the State and the fourth in size of the Lake ports, with one of the best harbors on the Lakes. Its site is in a clay swamp across the estuary mouth of the Milwaukee River, and its tributary the Menominee which joins it half a mile from the Lake; these streams are navigable for the largest steamers two or three miles up, and it is a city of draw bridges. It is famous for its beer, and handsome pale-yellow bricks from adjacent clay. It is a leading wheat port of the world, and one of the greatest shipping points of other grains, flour, and lumber, being the natural outlet of Wisconsin and Minnesota and part of Iowa; and the great water-power of the river is utilized in manufactures of great volume. From a village of about 2000 people in 1840, it sprang to 20,061 in 1850, 71,440 in 1870, 158,509 in 1885, and has 204,468 at present. Nearly half its population are foreign, much the larger portion Germans, and the remainder chiefly Scandinavians, Bohemians, and other East-Europeans. It is a thrifty, cleanly, orderly city, with a low death-rate.

The only other large Lake ports are Racine (21,000) to the south, a place of heavy manufacturing and considerable commerce, with many noted charitable and educational institutions; and Sheboygan (16,000) to the north, an outlet of a good agricul-

tural and lumber district. Manitowoc (8000) lies still farther north. The line of the Fox is headed by Oshkosh (23,000) across its mouth on Lake Winnebago, a flour and lumber port; by Appleton (12,000), a few miles below its exit from the Lake, near the "grand chute," or rapids, — a place of wooden-ware manufactures; and by Green Bay (9000) at its mouth. At the foot of Lake Winnebago is Fond du Lac (12,000), whose prosperity is based upon the same elements. An even greater development has fallen to the lumber cities of the western part: Eau Claire (17,500), on the head of navigation of the Chippewa, is the emporium of North-western Wisconsin, and growing with immense rapidity; and La Crosse (25,000), on the Mississippi at the mouth of a small river of its name, is the second city both in size and activity. Chippewa Falls (9000) is a few miles above Eau Claire. Janesville (10,800), on Rock River, is the market of the extreme southern portion; and Watertown (9000) is higher up the same river. Madison the capital (13,500) has a picturesque situation on an isthmus between two handsome navigable gravel-bottomed lakes; it contains the University of Wisconsin, established in 1849. Marinette (11,500) and Menominee (5500) are on opposite sides of the Menominee River at its mouth in Green Bay.

Wisconsin was made a territory in 1836, and included the vast district from Michigan to Western Dakota and Iowa; it became a State in 1848.

Minnesota. — The northernmost State of the Union, with Manitoba and Keewatin above it, lies in the semi-Arctic belt which extends above the Canadian Great Lakes, its rich soil paralyzed more than half of every year; the snows are deep and lasting, the winter cold is steadily enough below the freezing-point so that St. Paul can maintain an "ice palace" like Montreal, the sudden Arctic "blizzards" leave many a wayfarer stark in the roads, and the hunters and trappers in the northern woods rely on dog-sledges like the Eskimos, in place of the birch canoe of the summer. Yet its dry equable cold is less taxing to the system than the violent changes and the raw rains and fogs of the north-eastern States, and it is a favored sanatorium for Eastern consumptives. To it also flock in vast numbers the emigrants from Northern Europe, following the rule that settlers prefer a climate like their own: the races of Southern Europe dread a climate of predominant cold, the native of bracing if rigorous northern latitudes sickens in the languorous southern air. No other State — except perhaps Wisconsin, its neighbor — has so large an element of North-Europeans: there are populous settlements of Swedes and Norse and Danes, there is a colony of Russians, there are Finns and Lapps; it is anything but impossible that the dwindling people of Iceland may leave their once fair island, now becoming a second Greenland, and settle here *en masse*. This excellent foreign element has the fortune of being absorbed into a native growth of the happiest kind: migration within the United States also moves on parallels of latitude, and the early settlement of Minnesota, as of Ohio, was by good New England families, — St. Paul was for many years almost a typical New England city.

Of the 83,365 square miles of Minnesota's surface, — over a fourth larger than New England, — more than two-thirds are rolling prairie, with belts and groves of woodland; the remainder partly a vast tract of white-pine forests in the north-east, which extends into Canada, a series of huge marshes thick with stunted firs in the same section, the "Big Woods" in the south-west (a hard-wood forest 100 miles long and 40 miles wide), the rocky country bordering Lake Superior, and 4000 square miles of water in over 7000 lakes and lakelets, lying within a few miles of each other over nearly the whole State, — most of them small clear forest ponds, some of them of



THE UPPER MISSISSIPPI.

unusual size: the Lake of the Woods which Canada shares has 612 square miles, Red Lake in the Indian country 342, Leech Lake and Mille Lacs about 200 each, Winnibigoshish 142.

This State contains the great continental water-shed — not a ridge, but a low broad plateau of imperceptible slope — which turns part of its drainage toward the Gulf of Mexico and part toward Hudson's Bay; and another only a few miles from Lake Superior, rising to 759 feet above its shores, which brings a few short torrents to the system ending in the Gulf of St. Lawrence, the St. Louis being the chief of the latter.

The Mississippi rises in the rivulets which swell the little Itasca Lake, a beautiful expanse of water in forest-clad hills, 1575 feet above the sea, and issues from it a brook twelve feet wide and two feet deep. Flowing in a vast sweep first north, then east, then south, then west, it first enters the larger Pemidji or Traverse Lake and emerges from it 120 feet wide; a little farther on it passes through the still larger Cass Lake, and is 172 feet wide at the outlet; flowing through marshes and the much larger Winnibigoshish Lake, it joins with the outlet of Leech Lake, the largest of all, through rapids called the Falls of Pecagama, at which point, 270 miles from its source, it becomes navigable for small steamers; passing onward through oak and maple forests, marshes, sand-hills, and prairie, below the mouth of the Crow Wing River it turns southward, and at Sauk Rapids, 650 miles from its mouth, enters a rocky country extending for hundreds of miles. Seventy miles below this are the Falls of St. Anthony, of 18 or 20 feet, where the river is 1200 feet in width; and 60 miles south it broadens to an expanse called Lake Pepin, 25 miles long by one to three in width. In all, about 900 miles of the great river, or between a fourth and a third of its total course, lie in Minnesota.

It receives two powerful tributaries: the noble Minnesota 440 miles long, running southward and then north-eastward through the heart of the State, and emptying just below Minneapolis; and the St. Croix from near the shores of Lake Superior, 200 miles long, emptying not far below on the other side, and forming a considerable part of the Wisconsin boundary.

The Red River of the North, on whose banks lies Winnipeg, the metropolis of the Canadian North-West, has its farthest source in a little pond ten miles from Itasca; and in its early course — which is southward, as the Mississippi's is northward, curiously — is a thread on which are strung innumerable lakelets. Turning westward for a space, it suddenly changes again and flows steadily north to Lake Winnipeg, 650 miles from its source, through a plain — not properly a valley — thirty miles wide, the flattest considerable piece of land on the continent, — a treeless prairie of almost unbroken level for hundreds of miles, in whose caving soil its sluggish course is a mere winding trench. Its entire northward course divides the State from North Dakota.

The most noted part of Minnesota's rich agricultural production is of wheat and flour, in which it ranks among the first of the States in volume and the very first in quality, the fine flour from its hard spring wheat being unequalled in the world. It has been seriously devastated by the locust and the chinch-bug, but expanding area of production seems singularly to have decreased their visitations. The State is also in the maple-sugar belt, its oats and potatoes are famous, and stock-raising is a heavy industry. Manufactures are developing: the chief branch is still the making of flour.

Minnesota has two great cities in name (though practically only one); and they together are the leader of the North-West, one of the greatest business centres of the Union, developing with a rapidity which outstrips the boldest conjecture, and if they unite under one name, likely to be the fourth in size of the Union. The nucleus was the comparatively old city of St. Paul, the head of navigation for large steamers on the Mississippi, and the capital of the State, — a handsome quiet place which had risen only to 20,030 inhabitants in 1870; eight miles above, at the Falls of St. Anthony, the manufacturing village of Minneapolis had at that time 13,066, and St. Anthony across the river 5013. Then came the sudden upspringing of the flour manufacture,



SIoux INDIANS.

caused by what is still known as the "new process," which made Minnesota wheat, previously regarded as inferior, the most valuable in the market; huge mills were erected to utilize the enormous power of the falls, and in 1880 Minneapolis had 46,887 souls and St. Paul 41,473. Even this growth, however, is trifling compared with the leap in the next five years, when Minneapolis contained 129,200 and St. Paul 111,397, and the residence limits of the two were but two and a half miles apart; and at present the two contain 297,894, by the census of 1890. Both are seats of immense trade as well as of general manufacturing; and the character of their population and its intellectual activities are exceptionally high.

The second city in size is Duluth, at the western end of Lake Superior, whose sudden growth — from 3483 in 1880 to 17,685 in 1885, and to 33,115 now — rivals

even Chicago; it is becoming one of the greatest shipping points for wheat and lumber. The fourth is Stillwater (11,000) on the St. Croix, 20 miles from St. Paul, a great lumber-centre; and the third Winona (18,000), on the Mississippi 160 miles below St. Paul, a port of enormous wheat shipments and lumber trade and manufacture. Brainerd (5700), on the upper Mississippi just above the Crow Wing, is the market of Northern Central Minnesota, and growing very rapidly. Red Wing (6000), on the Mississippi at the upper end of Lake Pepin, is also a wheat, flour, and lumber port. Mankato (9000) is a manufacturing city at the great bend of the Minnesota; and Faribault (7000), between this and the Mississippi, is remarkable for the number of its educational and charitable institutions.

Minnesota, organized as a Territory in 1849, and admitted as a State in 1853, had nevertheless but 6077 white inhabitants in 1850; and it was nearly all a roving and hunting ground for the ferocious Sioux, who in the Civil War took advantage of the draining off of the male population to organize a frightful massacre of the settlers, a thousand of whom were butchered and indescribable outrages perpetrated. They were finally conquered and removed from that section; there are several Indian reservations in the northern part, of comparatively tractable Ojibwas. With 172,023 inhabitants in 1860, it had 780,773 in 1880 and 1,118,486 in 1885, and has now 1,301,826.

The Dakotas. — Conterminous with Minnesota on the north and extending below it on the south, is the vast region formerly constituting the Territory of Dakota but divided since 1889 into the States of North Dakota and South Dakota. The two divisions are separated by the seventh standard parallel, making the area of the northern State 70,795 square miles and that of the southern 77,650. The growth of population has been very rapid since 1880, when the census returned 135,177 inhabitants for the Territory. In 1890 North Dakota had a population of 182,719 and South Dakota 328,808.

North Dakota's eastern boundary is the western side of the flat Red River basin with that of its affluent the Cheyenne; westward of this in the northeast is a small plateau containing a salt lake of 400 square miles, 50 miles long by 14 wide, — Mini Wakan, Devil's Lake; and westward again is the valley of the Mouse which feeds the Assiniboin. Just below the early Cheyenne begins the James, of 600 miles, flowing nearly the whole width of both States and joining the Missouri in the southeast of South Dakota; this section is also drained by the Vermilion of 170 miles, and the Big Sioux of 300, all traversing treeless, rolling prairies and ending near the corner where South Dakota, Nebraska and Iowa meet, with Minnesota not far off. South of the Red River basin and east of these is the *Coteau des Prairies*, a narrow plateau dotted with small salt lakes, beginning near the James River and extending over into Minnesota; it is 200 miles long, from 15 to 20 miles broad, and from 1000 to 2000 feet above sea-level. West of all these, in a great curve from north to south, stretches the *Coteau du Missouri*, a grassy plateau separating the basin of the James from that of the Missouri, which runs diagonally through its centre with 663 miles of its course in the Dakotas (all navigable, but needing an expert pilot), from the mouth of the Yellowstone to that of the Big Sioux, and whose basin — with the basins of its tributaries and their watersheds — comprises five-sixths of the entire area of the States. These affluents are not navigable to any distance: the chief are the Little Missouri (450 miles) in the west of North Dakota, coming from Wyoming; the Big Cheyenne of 500 miles, crossing South Dakota near the centre, and formed of two "forks" encircling the Black

Hills on the north and south; the White River of 330 miles, running through the *Mauvaises Terres*; the Niobrara forming part of the boundary with Nebraska, as do those "Bad Lands" in the extreme southwest, both described under *Nebraska*.

The Black Hills (so called from their heavy clothing of dark pines) are a spur of the Rockies pushed abruptly out into the prairie, their highest summit (Harney Peak) 7403 feet above the sea; with well-watered valleys and grassy upland "parks," the whole "forms an oasis of verdure among the open plains." They contain rich deposits of gold, which first drew the stream of immigration thither, besides silver, lead and tin. But neither of the Dakotas is primarily a mining district. Both belong to the great wheat belt of the north central valley, and have the dry air and terrible but bearable winters (markedly milder in the southern half) of the semi-arctic zone; and even the mining proprietors have generally found better profit in becoming farmers and herdsmen, utilizing for great cattle-ranches the vast plains till lately a grazing-ground for the fast-disappearing bison. The Dakotas lead all the States in the quantity of wheat produced, raising yearly 60,000,000 bushels. This immense product controls the market of the world. Dakota wheat is also unrivalled in quality and commands higher prices than any other. The yield in South Dakota is much smaller than in the northern State; here corn of an excellent quality is the chief product of agriculture.

As in Minnesota, the North-European elements of the population are very large, and the prevalence of Scandinavian blood and traditions in this region will give it a distinct local flavor of political and literary importance. The business development of the old Territory was along distinct and widely-separated lines, with little of common interests; it was the impossibility of connecting these isolated centres or reconciling their conflicting interests that finally led to the formation of the two States of to-day. The oldest settlement was at Pembina, on the Red River of the North at the Manitoba boundary, established in 1812 by Lord Selkirk in the belief that it was part of the British Hudson's Bay Company territory included in his purchase of Assiniboia; but the leading settlements on the river are now Fargo (5000), opposite Moorhead, in Minnesota, one of the chief financial and commercial cities of North Dakota, Grand Forks (5000), lower down at the mouth of the Red Lake River, and Wahpeton (1500) higher up. Jamestown (2300) in North Dakota and Huron (3000) in South Dakota head the trade of the James River, while that of the Missouri in the northern State is led by Bismarck (2200), its capital. In South Dakota, Sioux Falls (10,000), the chief city, represents the business of the Big Sioux; Yankton (3700) ten miles above the mouth of the Niobrara, was for many years the only considerable town in the old Territory; then follow, Pierre (3200), the temporary capital, on the Missouri at the geographical centre of the State, and Aberdeen in the north. Deadwood (2400) is the Black Hills emporium.

Iowa is a choice portion of the Great Central Plain reaching from the Mississippi to the Missouri and its affluent the Big Sioux, and occupying — with its 56,025 square miles in a square block — nearly three degrees of latitude corresponding to the district from New York Harbor to Lake George. It is all undulating prairie, rising in long gentle swells from the Mississippi to a water-shed running diagonally from a height of 1700 feet in the north-west to a slight elevation in the south-east; the larger section on the east and drained to the Mississippi by a series of (nearly all) parallel streams with a south-eastward course, the western part drained to the Missouri by shorter and swifter rivers flowing first south-west and then south as the Missouri turns eastward.

The chief of the latter group (beginning at the north) are the Little Sioux increased by the Maple (300 miles), and the Boyer (130 miles), debouching in Iowa; and the Nishnabotona (220 miles), the Nodaway (200 miles), the Little Platte (300 miles), the Grand (300 miles), and the Chariton (250 miles), all emptying in Missouri. The leading Mississippi affluents are (from the north) the Upper Iowa (150 miles), the Turkey (160 miles), the Maquoketa (175 miles), the Wapsipinicon (250 miles), the Iowa and Cedar (the "main" stream 375 miles, the "tributary" 400, the two forming the second largest system of the State and joining not far from their mouth), the Skunk (275 miles), and lastly the Des Moines, far the greatest and commercially most important of all, rising in Minnesota and running diagonally across the entire State in a course of 550 miles, forming its great central artery, with a basin of 10,000 square miles and a south-eastern corner prolonging the State to include its entire channel. Some of these have been navigated for some distance, but the navigation is of slender importance. The northern part of the State has a continuation of the many small clear pebbly lakes of Minnesota, some of them — the Walled Lakes — being surrounded by a natural wall of loose stones.

Iowa's winter climate is severe from the Arctic winds, but bearable from its dryness; the summers are tempered by the same cause, and the State is one of the healthiest in the Union, — the streams having generally rocky channels instead of miasmatic bottom-lands, and the dry pure air making it a valued sanatorium for consumptives. It is predominantly an agricultural State, one of the leading food-producing sections of the continent; very evenly settled by an immigration of excellent quality, largely native and Northern; with many local markets, but few important centres except the numerous Mississippi and Missouri River ports, the former exceeding the number of those of any other State on the river. It has some good woodland, but needs it all for its own building; is quite rich in coal, clays, and building-stones, and a prominent but decreasing lead producer from the same stratum which extends through Northern Illinois; and is becoming of importance in manufactures, — but the working part of its 1,911,896 inhabitants are mostly farmers.

The capital, Des Moines, across the river of its name at the mouth of the Raccoon, with 50,000 people and growing fast, — with large manufactories mostly of heavy iron goods, and the seat of a university, — is the largest city. Dubuque on the Mississippi (30,000) is the third, the oldest settlement in the State (named from the French trader who mined lead and trafficked with the "Ioways" — a branch of the Sioux — at this place), the mart of the lead district, not far from Galena in Illinois, and the uppermost considerable Iowa town on the river. Down the river are Clinton (13,600), opposite Fulton in Illinois; Davenport (26,800), opposite Rock Island, at the foot of the "upper rapids" in the Mississippi and drawing enormous power therefrom; Muscatine (11,500), at the end of a great western bend of the river; Burlington (22,500), the southeastern metropolis and the capital from 1838 to 1857; and Keokuk (14,000), the "Gate City," at the extreme southeastern corner, just above the mouth of the Des Moines, at the foot of the "lower rapids" and of a great and costly ship canal, and opposite Warsaw in Illinois. These are all heavy shipping points for grain and lumber, and active manufacturing places; they lie usually on slopes rising to bluffs which command magnificent views, and at most of them the Mississippi is bridged.

The two great Missouri River emporiums are Council Bluffs (21,500), looking down on the bottoms which extend three miles thence to the river opposite Omaha in Nebraska; and Sioux City (37,800) near the mouth of the Big Sioux and the lines of

Nebraska and South Dakota, the second in size, a manufacturing place and supply point for the country to the west. Next to the capital, the most important interior centres are Cedar Rapids (18,000) on the Cedar, in the east of the State, Waterloo (6700) higher up that river, Ottumwa (14,000) on the Des Moines, Marshalltown (9000) in the centre, and Creston (7000) in the extreme south.

The present territory of Iowa was part of the Louisiana purchase; but it has undergone numerous changes of name, limits, and ownership, belonging at different times to Missouri, Michigan, and Wisconsin Territories, and as a Territory including most of what is now Minnesota. It became a State in 1846, and gained its present bounds in 1849.

Nebraska.—This typical section of the western valley is developing with such rapidity that statistics about it are worthless almost as soon as they are published: it is in precisely the position of Illinois in 1850. Made a territory with imperial bounds by the too famous Kansas-Nebraska Bill of 1854, it still swarmed with murderous Indians and having no railroads, and its streams not being navigable, its settlement was very slow; though admitted as a State in 1867, it had but 122,993 inhabitants in 1870. Building the Pacific railroad and removing the Indians gave it a tremendous impetus, and its growth has scarcely been excelled in America: in 1880 it had 452,402, in 1885, 740,645, and by the census of 1890, 1,058,910. It has salt, clay, and building stone, and some coal, and manufactures and the smelting of ores of the precious metals are important; but its agriculture is of course overwhelmingly predominant. Its 30 to 40 inches of rainfall suffices to give immense crops over its 77,510 square miles of nearly flat prairie, with a fertile soil under a tough sod used for fencing, stretching from the Missouri to the foot-hills of the Rockies,—though the ravages of the “grasshopper” (locust), now practically at an end, have been terrible drawbacks; in the dreaded winter blizzards, the “draws” or ravines give shelter to the cattle. The chief break in the fertility of the land is the tract of shifting sand-hills in the north-west,—gradually becoming fixed by coarse grasses,—and at the western extremity the wonderful *Mauvaises Terres* or Bad Lands: a basin 30 by 90 miles in extent, and one to two hundred feet below the prairie, set with thousands of columnar masses of rock and compacted clay sometimes two hundred feet high, separated by a maze of tortuous passages, and thick with bones of the hyæna, rhinoceros, and other animals long vanished from the continent. On the extreme north-west are some high isolated peaks or “buttes,” one of which reaches to 8000 feet.

The streams of Nebraska are totally unnavigable. Near their sources they are shallow sluggish canals in the alluvium, without banks, thinly fringed with poor timber; their valleys steadily deepen and become channels in a broken country, edged with bluffs and fairly wooded, and the currents are broken by rapids every few miles, so that the State has vast water-power. One-fourth its entire surface is reckoned to consist of wooded bottoms. The great central stream is the Platte, flowing through its entire extent,—in length one of the leading rivers of the continent, in volume a creek: its two branches—the North and South Forks—rising in Colorado, and after a course of 800 miles uniting in the centre of the State, 450 miles from the Missouri, flowing through a valley twenty or thirty miles broad, and joining that river not far below Omaha. It drains a fertile basin of 300,000 square miles, but is much of the way a series of shallow parallel channels with long slender islands between; its chief tributaries are the Loup and the Elkhorn, streams of great beauty. Forming, by itself and its affluent the Keya Paha, part of the northern boundary,

the turbulent rocky Niobrara joins the Missouri above Yankton in South Dakota, for no less than 180 miles of its course of 450 flowing through a deep cañon, then traversing the desert country of the sand-hills, finally draining a broad rich valley. In the south, the Republican River flows through parched plains to feed the Kansas.

A chief source of Nebraska's prosperity are its vast natural pastures, the blue-joint of the uplands and the *tulé* of the bottoms affording such nutriment over 36,000 square miles of well watered country that hundreds of thousands of Texas and Kansas, Dakota, Montana, and even Oregon cattle are yearly driven there to be fattened for the markets of the East. The vast herds of buffalo (bison) which formerly grazed there are practically exterminated.

The population of Nebraska, as of all the North-western States, includes great numbers of Scandinavians and natives of Bohemia, Hungary, and other parts of eastern Europe; and the chief city, Omaha, is a rendezvous for many nationalities, publishing, among others, Swedish, Danish, and Bohemian newspapers. This city, whose growth is of the peculiar American rapidity, — 16,083 in 1870, 30,518 in 1880, 61,835 in 1885, and probably 140,500 at present, — lies on a plateau 80 feet above the Missouri, 18 miles north of the junction of the Platte. It is the seat of an immense supply trade to and export from the mining and agricultural sections of the West, and has heavy manufactures and the largest silver-smelting works in the country. Lincoln the capital (55,000), in the southeast, is a great trade centre, and has salt works near. Hastings in the southern centre, not far south of the Platte (2817 in 1880, 7980 in 1885, about 13,500 now), is destined to an important future. Beatrice in the southeast (13,800) has quarries, and Grand Island (7600) is north of the Platte in the centre, where an island 50 miles long divides it into two main channels; both are growing fast. Nebraska City (11,500) is a trade and manufacturing port on the Missouri, 26 miles below the mouth of the Platte. In a few years there will be important trade centres which scarcely exist at present.

Kansas.—No other State of the West has so thrilling and important a history, and none so monotonous and unsalient a surface, as this rectangle of 82,080 square miles cut from the western prairies, with totally arbitrary bounds except for some 150 miles of the Missouri in the north-eastern corner. It contains the geographical centre of the United States (excluding Alaska), and it was the centre and pivot of the most vital episode of United States history except the Revolution itself. It is nearly pure prairie, sloping gently from the west to the east and south (that is, toward Missouri and the Indian Territory), and its streams of course all flowing in those directions. It has no hills, practically no woods except fringes of the river-bottoms, almost no swamps or ponds. Its western plains are an almost rainless district formerly known as the "Great American Desert," but in fact rich prairie land needing only irrigation to make it as good as any in the West; and its thousands of creeks are gradually being utilized to create extensive irrigation systems, for lack of which this section is still sparsely settled. But the better parts are filling up with extreme rapidity: with only 135,807 inhabitants in 1865, after the bitter and bloody struggle between the sections for supremacy in populating it, the close of the War gave it a vast impetus, and it had 364,399 in 1870, 996,096 in 1880, and 1,268,563 in 1885; it has 1,427,096 at present, with large elements of population from central and eastern Europe. Its mining resources are small except for large coal deposits; but these are stimulating important manufactures. It is, however, essentially a State of food products.

It has no navigable (at least navigated) streams except the bordering Missouri in the north-east. Its central system, draining the whole northern half, is that of the Kansas (properly the Kaw), a close parallel to the Platte of Nebraska: 300 miles above its junction with the Missouri at Kansas City, it is formed by the junction of the Smoky Hill of 400 and the Solomon of 300 miles through the parched and treeless plains of western Kansas, the latter receiving the Saline of 200; not far below the junction it receives from Nebraska the important Republican of 550 miles, rising in Colorado, and farther down the Big Blue of 300. The southern half is traversed and drained by the Arkansas and its tributaries: that great river, rising in the Rockies 10,000 feet above the sea, flows tortuously 500 miles along three-fourths the length of the State, turning south near the centre into the Indian Territory; in the south-west a maze of brooks feed its affluents, the Cimarron and the Salt Fork, and in the south-east its other tributaries, the Verdigris of 300 miles and the highly important Neosho of 450, both debouching almost at the same spot, Fort Gibson in the Indian Territory. In the east, south of the Kaw, the Osage of terrible memory (its early course known as the *Marais des Cygnes*, though at the scene of the massacre not a marsh, but flowing between steep wooded banks) gathers to join the Missouri near Jefferson City in Missouri.

The four cities which till recently were the only considerable centres of population in Kansas, and are still among the first seven, lie in a little quadrilateral at the east, of only 50 miles at most, — two on the Missouri and two on the Kaw. The lower one on the former, Leavenworth, is the fourth city, with 20,000 souls; it is a manufacturing place, built on a natural limestone levee, which cannot be eaten away by the muddy torrent whose banks cave and change continually. Higher up is Atchison (14,000); the river is bridged at both. Topeka the capital (31,000) is on the Kaw, and Lawrence (10,000) nearer its mouth; at the mouth, divided merely by the State line from Kansas City, Mo., is Kansas City (38,000); now the chief city, it numbered in 1880 only 3200. Wichita (24,000) had but 4911 inhabitants in 1880; it is the emporium of the south, on the Arkansas at the mouth of the Little Arkansas. The chief trade centres of the east are Emporia (7500) on the Neosho, Fort Scott (9000) near the Missouri border, Parsons (7000) in the extreme southeast west of the Neosho, and Ottawa on the Osage (6000).

Montana. — Till a few years ago, the camps of silver, gold, or copper miners or prospectors (not always the same thing), a few small villages for the supply of their needs, and a few scattered herdsmen's ranches, were the only civilized habitations in this immense State of 146,080 square miles (next in size to California), the eastern plains being merely roaming-grounds for vast herds of buffalo and for the Indians who hunted them: but the rapid appropriation of the central prairie lands has forced the stream of immigration to advance to the mountains, and even among them in the deep green valleys or "divides;" old settlements are growing and new market centres springing up, manufacturing and smelting by improved machinery are developing still others, and its recent admission as a State (1889) will increase its agricultural and manufacturing importance.

Its eastern half is the westernmost portion of the great valley, drained through its heart by about 900 miles of the Missouri's earliest course, and by practically the whole of the Yellowstone's, — whose torrent of liquid mud is navigable, as is the Missouri, for about 300 miles within the Territory, — as well as by affluents of each that equal Eastern rivers of world-wide note: the Big Horn of 550 miles, the Powder of 350, etc., feed-

ing the Yellowstone; the Mussel-shell of 300, and others not much less, swelling the Missouri. Many of them, however, though figuring bravely on the map, are little more than dry channels except in the rainy season.

Montana lies across the main ranges of the Rockies, and the western boundary is the Bitter Root parallel ridge, which joins its principal in the south-west; in the lofty valley between the two gather streams which unite to form Clark's Fork of the Columbia. Scattering ranges are thrown out far to the east, as the Little Rockies north of the Missouri and the Powder River range south of the Yellowstone. But the plains themselves rise on rocky foundations to the mountains, and the river-channels wind through parti-colored rocks worn by air and water into shapes of fantastic architecture, — turrets, cusps, gables, gate-ways. The elevation of the Rockies rises from the north to over 10,000 feet, Emigrant Peak being 10,629; but along its whole line the peaks are clothed in perpetual snow. The vast unsheltered plains east of the Rockies bear the terrible winter winds and snows of all this northern region, and many thousands of cattle from the wandering herds of stockmen sometimes perish in the "blizzards"; but in the "divides" between the ranges — those of the great divide between the Rockies and the Bitter Roots being mostly broad and beautiful basins with smooth grassy meadows — they often find sufficient shelter and plentiful pasturage the winter through. These valleys in their early stages are usually mere rock gullies or "cañons," at the bottom of which foam shallow turbulent streams, uniting around "buttes" or abrupt rock faces; often the channelling waters have cut away their intervening walls and left the terminal buttes standing solitary in endless shapes of picturesque architecture, sometimes two miles away from any other mass, alone on a rocky plain.

More than 43,000 square miles of Montana's surface is covered by Indian reservations: Gros Ventres, Piegans, Blackfeet, Flatheads, Crows, River Crows, Bloods. Assiniboinis, Kooteways, Pend d'Oreilles, Sioux, — about 20,000 in all, in a condition which renders them unable to gain a livelihood on a territory two-thirds the size of New England. The civilized inhabitants numbered but 39,157 in 1880, of whom 7176 were colored, Chinese, settled Indians, and half-breeds; there were 84,000 in 1884. and there are 132,159 now. The city development was at first entirely in the mountains, on the early Missouri and Columbia, being merely supply centres for the workers in the rich gold-mining districts: Helena the capital (13,800), Butte (10,700). Anaconda (4000), Great Falls (4000), Missoula (3500), Livingston (3000), Bozeman (2000); but the great agricultural development beginning on the plains is building up towns along the Missouri and Yellowstone, — Benton, the head of navigation on the former, Miles City, Billings, etc., on the latter.

Wyoming. — The mighty mass of the chief Rocky Mountain chain extending diagonally through the State, with lofty snow-clad peaks, sides dark with pines and firs, foot-hills clothed with deciduous trees, river-bottoms lined with cotton-woods and willows, deep rock cañons; high cold rolling plains, with flat-topped buttes, singly or in groups of architectural forms startlingly suggestive of human architecture; a breach in the mountain which forms a pass (Bridger's) at a height of 7000 feet, but which is a broad undulating plain with no elements of grandeur, altogether different from the terrific gorges of the Andes, and forms a base from which the mountains seem but trivial; in the north-western corner, the Yellowstone National Park, an area of 3575 miles of magnificent cañons and numberless geysers of nearly boiling water and mud volcanoes and gigantic cataracts, in the heart of the mountains, kept from the greed of

speculators and the defacement of advertising through purchase by the government, — such are the 97,890 square miles of Wyoming. Its mountain system is called by many different names, — the Shoshone, the Elk, the Teton, the Bishop, the Gros Ventre, the Wyoming, the Owl Creek, the Wind River, the Sweetwater, the Seminoe, the Rattlesnake, the Laramie, the Medicine Bow; easternmost of the main range, the Big Horn; and in the northeast the mass of the Black Hills extending into South Dakota. The Teton division contains the highest peak in the Territory, — Mount Hayden, formerly the Grand Teton, 13,858 feet, — one of three prominent peaks long known as the Three Tetons; and Mount Moran of 12,809 feet. Fremont's Peak of the Wind River is 13,576 feet; Medicine Bow is 12,231, Chimney Rock of the same range 11,858. The foot of the Big Horn range is washed by the river of the same name, flowing to the Yellowstone; in the north-east the waters gather into the Powder, tributary to the same river; in the south-east they flow to the Platte; while on the west and south of the Rockies they take devious courses but find their way at last partly to the Colorado and the Gulf of California, partly to the Snake and the Columbia. In the National Park are gathered the early waters of the Missouri and the Yellowstone, the latter plunging over two precipices of 140 and 397 feet.

Wyoming's soil is too flinty and its best parts too scattered to give it for a long time a considerable population. It has gold and silver, iron and coal, good pasturage, and in all much good agricultural land; but the mining of coal and the pasturing of sheep and cattle by a few Mormon herders are as yet its leading industries, despite the first Pacific railroads crossing its entire breadth. In 1880 it had 20,788 people, many of them miners in the Black Hills gold district; it has 60,705 now. About 4000 Indians are on reservations, half of them Shoshones on a reservation of 2375 square miles. It was admitted a State in 1890.

There are no large places. The capital is Cheyenne (11,700), in the extreme southeast; thence along the railroad line in the south are Laramie City (6500), Rawlins (2500), Green River City, Evanston at the Utah border, etc., and South Pass and Atlantic City are not far off the line.

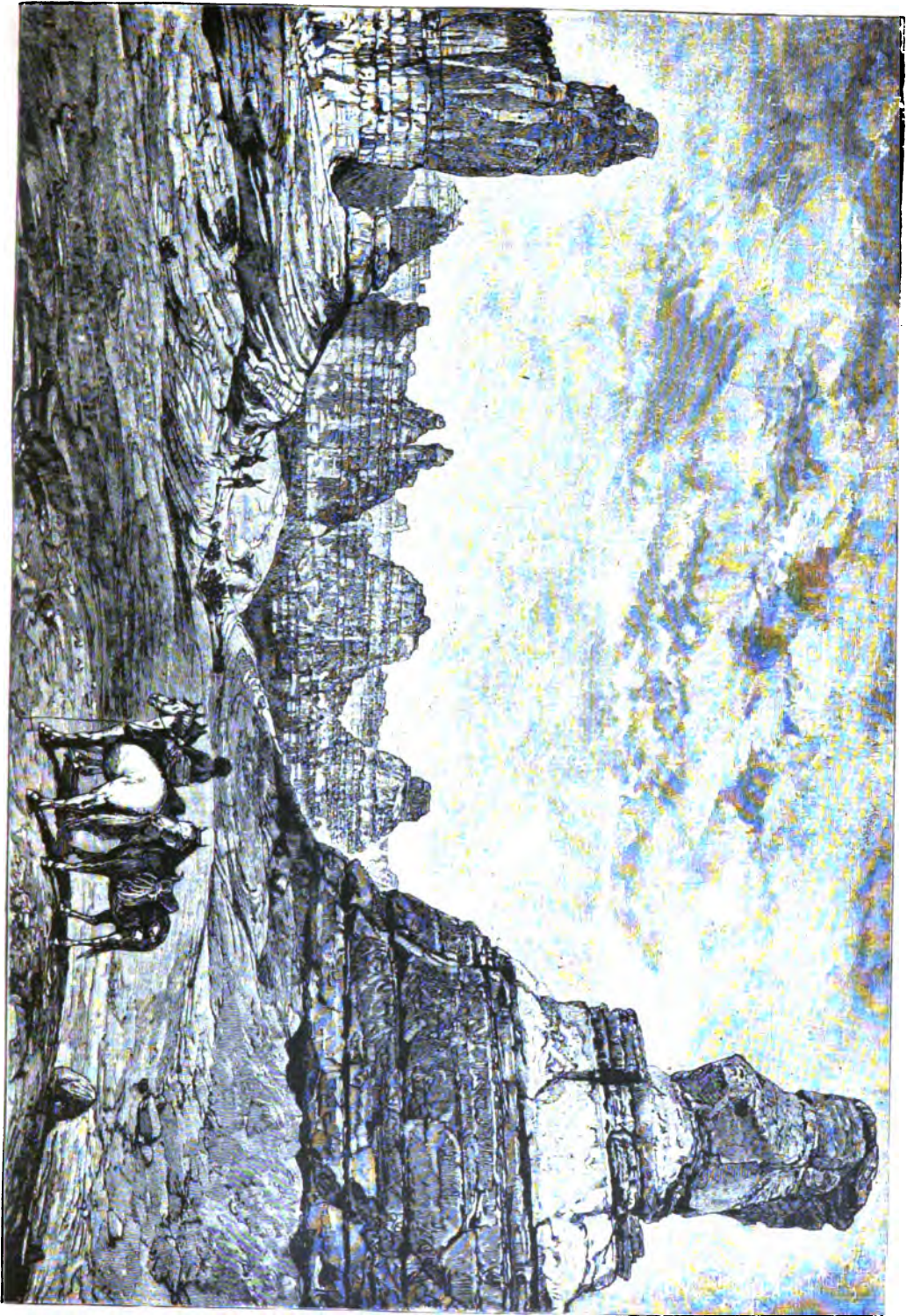
Colorado. — Until recently the youngest of the States of the Union, with a bulk but little larger than the one last named (103,925 square miles), is cut on the south from the same Rocky Mountain section, and differs from it only in lying farther to the east, thus including a large section of the great prairies which the other lacks. Its entire western half is composed of the highest summits in the United States, rising from the enormous base of the Rockies, and inclosing a series of "parks" or elevated watered valleys which extend with slight breaks through its entire length in the State. The main chain of the mountains here splits into a confused mass of lateral, parallel, and oblique ranges, — the Roan or Book, the Elk, the San Juan, the Saguache (Sawatch), the Cochetopa, the Sangre de Cristo, the Culebra, the Uncompahgre, the Raton, the Medicine Bow, the Park Range, and the Front Range of the main body, and so on; and the chief of the giant peaks can scarcely even be mentioned here. Long's Peak and Pike's Peak, of 14,271 and 14,147 feet respectively, are far the best known as landmarks of the old overland emigrant route; but others are higher, no less than twenty-two being over 14,000 feet, the loftiest being Mount Harvard of the Sawatch range, 14,375 feet. The most striking in appearance is Holy Cross (14,176 feet), with a deep ravine and a transverse ridge which outline a vast cross in snow. All these mountains are covered with perennial snow. In the "parks" they inclose — North Park, Middle Park, South Park, San Luis Park — rise the streams which flow in all

directions: in the first are the sources of the North Fork of the Platte, in the second those of Blue River flowing to the Grand which feeds the Colorado, in the third the earliest waters of the South Fork of the Platte and the Arkansas, in the last the headwaters of the Rio Grande. On the east the abrupt rocky faces of the mountains look down on low rounded foot-hills called "hog-backs," themselves facing vast treeless arid



HORSESHOE CAÑON, GREEN RIVER.

prairies covered thick with gorgeous wild-flowers, which irrigation turns to farming land as rich as that of Illinois itself, and which is beginning to receive a share of the never-ceasing stream of Eastern and European immigration. Till recently mining had been its sole celebrity: the gold and silver mines of Gunnison and Leadville are among the marvels even of Western richness, and Denver itself began in the "gold fever;" but its rapidly increasing population of 412,198 people will



THE LAND OF THE STANDING ROCKS.

soon make even this a subordinate interest, as the growing irrigation works reclaim the desert.

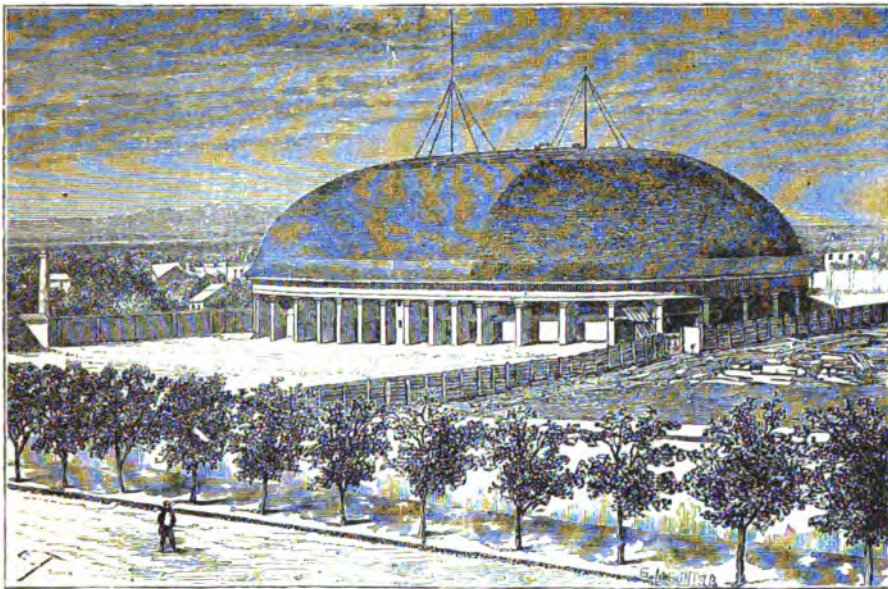
The great city of Colorado is the largest between Kansas City and San Francisco; it is Denver, just east of the great range, across the South Platte on a site 5196 feet above the sea. Founded in 1858, and with but 4749 people in 1870, it leaped into immense importance as the grand distributing point of supplies for and productions from the mining districts of the Rockies; it had 35,629 in 1880, has fully 107,000 at present, and will rival the great lake and river cities yet, having extensive manufactures as well as trade. The second in size is Pueblo on the Arkansas, the emporium of Southern Colorado, with 3217 inhabitants in 1880 and 24,500 now. The third is Colorado Springs with a population of 11,000. Leadville (10,500), Boulder. Cañon City, Central City, are mining centres; Greeley and Evans are agricultural marts.

Utah and Nevada: the Great Basin; the Mormons.— West of the great central body of the Rocky Mountain chain runs at a distance of several hundred miles a mighty parallel range, which almost equals in grandeur of mass and the height of its snowy summits the Rockies themselves, but which unlike the latter is not an absolutely unbroken water-shed; and between the two, barred from the vapors of both oceans and of the Great Lakes, and cut off from all drainage to the sea, lies a gigantic plateau from 4000 to 5000 feet above the ocean level, of scanty rainfall and nearly a desert, known as the "Great Basin," and politically divided between the Territory of Utah next to Colorado (84,970 sq. m.) and the State of Nevada next to California (110,700 sq. m.),— ending on the south with the "Plateau Province," the district of the cañons, described in the following section. This basin is not a single plain: it is a series of broken ridges from one to five thousand feet above the level at their bases, mostly parallel to the great chains, with intervening valleys several miles wide which where the subordinate ranges are interrupted spread out into considerable plains, sometimes level, sometimes hilly and broken; these separate valleys or basins form "sinks" for the mountain rills fed by such rains as fall upon this district, which therefore begin and end with themselves, sometimes ending in an alkaline lake, sometimes in a marsh, sometimes merely sinking and disappearing in a broad expanse of alkaline sand-flat, covered with sage-brush and greasewood and thin coarse grass. The climate is bitter and violently capricious: deep snows, intense cold, and furious storms in winter are followed by sultry heat and equally violent winds in summer,— the latter bringing no coolness, but only filling the air with whirling clouds of alkaline dust which is caustic enough to eat into the membrane of nose and lips and eyes. It was long thought that the sage-brush plains were hopelessly sterile, and that the only agriculture possible was in the few valleys high enough to be permanently watered,— for, up to the snow line, the land in these districts grows more tillable as we ascend, and above 7000 feet is usually fair grassy upland, with the hill-sides heavily wooded; but it has been found that with irrigation and subsoil ploughing good crops can be raised even from the sand-barrens.

Eastern Utah, beginning at the north with a transverse range known as the Uintah Mountains, is throughout a high rocky district, through which the Green River first ploughs its way in deep rock channels; then joined by the Grand, they take the name of Colorado, and the stream flows through the most stupendously magnificent scenery on the continent till it emerges on the open plains of southern Nevada and California to enter the Gulf of California. In the centre rises the Wahsatch range, with peaks of over 12,000 feet; and after passing broad plains upon

the west, there begins and extends through Nevada a series of smaller ranges whose names and complexities defy description, their valleys giving rise to two streams of considerable length, both narrow, shallow, and brackish, and running into each other at several points,—the Humboldt of 500 miles, and the Reese of 150: the former ends in the salt Humboldt Lake in western Nevada.

Near the northern borders of Utah begins the large salt inland sea around which has centred the curious society which practically *is* Utah, and whose central settlement is the one place of any size in Utah. Great Salt Lake, 90 miles long by 25 to 30 broad, covering 2000 square miles, lying 4200 feet above the sea, with islands in its bosom (Antelope Island being 10 miles long) which rise 3250 feet above its waters, is the saltiest body of water on earth except the Dead Sea, and so intense a brine



THE MORMON TEMPLE.

that nothing living has been found in its waters except a sort of shrimp and a few insects; it receives from the south, through Jordan River, the outflow of the still fresh and fish-stocked Utah Lake, — both lakes the remnants of a far greater one which formerly occupied all North-western Utah.

This Territory is the central seat of, though far from being the only one controlled by, the great ecclesiastical despotism of the Mormons, whose history has repeated in what seems—even with full knowledge of the facts—an incredible measure the career of the great sects of the Oriental and African deserts, and repeated them in the very heart of the most advanced civilization of the world. Beginning in the State of New York less than sixty years ago, an unschooled farmer's lad founded, on the faith of a new divine revelation, a hierarchic ecclesiastical, social and political organism, now numbering fully 200,000, not only holding Utah (where they are probably about 125,000 out of 207,905 altogether), but forming the controlling element in Idaho and Arizona, almost dominating Montana and Wyoming, and forming

an element to be counted with in Colorado and Washington. Driven from State to State and hunted from East to West — its leader murdered by a mob while in prison, it was managed for many years by one of the ablest organizers of the world; evaded control by settling in a district then belonging to Mexico, and which, though a year after it fell into the hands of the United States, was for a generation afterward beyond effective supervision by the latter; its funds were sagaciously used to maintain a band of emigration agents to allure recruits from the European peasantry, to whom the immediate result was a great gain in material comfort; and it has steadily dissuaded its members from mining industries, preferring to have them hold (and be held by) the land, as farmers and herdsmen. The mines and the commercial advantages of their metropolis, Salt Lake City, have, however, drawn a considerable "Gentile" population, and the increasing power of the Mormon hierarchy alarmed the national government into beginning in earnest to break it up. An integral part of its creed has been for thirty-five years the institution of polygamy, thus making it amenable to the criminal laws of the land; and though for financial reasons its practice cannot be universal among the sect, the leaders have consistently made its acceptance, and its practice when possible, a touchstone of fidelity to the interests of the Mormon Church. The national government has retained the power of action within the Territory by refusing to admit it as a State despite the persistent attempts of the Mormons to accomplish it, they having organized the "State of Deseret" and applied for admission as long ago as 1862; and has passed laws repeatedly to bring them to terms. But it was not till 1882 that, disregarding the clamors of "persecution," Congress passed a law disfranchising and excluding from juries all polygamists or believers in polygamy; and this was followed by criminal prosecutions against polygamists which have sent the church leaders to prison or into hiding, and seriously disorganized the machine. Another measure in 1887 confiscated all Mormon church property, except some church buildings and priests' houses, and turned the proceeds over to the school fund; and it is probable that with the increasing Gentile population, the political power of the church will before long be thoroughly broken. Their capital, and that of the Territory, Salt Lake City, near the Jordan River to the southeast of the lake, has 45,000 people, and Ogden 15,000.

The Territory is very rich in the precious metals, and its mining product is large; but the business has built up no very large places.

Nevada is a still richer mining State. For many years the "Comstock lode" at Virginia City was the chief of the silver-bearing veins of the world; it produced hundreds of millions of dollars' worth, and made that city a place of about 11,000 people. The State still has very valuable mines, but these demand only a small population; and though admitted to the Union in 1864, with but about 40,000 people, in the expectation of a rapid growth, it had only 62,266 in 1880, shrinking to 45,761 in 1890. The agricultural interest, however, is increasing, and may draw a fresh population.

The greater part of the mines and consequently of the industrial development are in the Sierra Nevada. Carson, the capital (4000) and Virginia City (8500), are close together near the California line; but Elko is in the northeast, Hamilton and Pioche in the south.

The Plateau Province: The District of the Cañons. — Directly west of the main crest of the Rockies lies a tract of more than 100,000 square miles — comprised in southern Wyoming, eastern and southern Utah, northern and eastern Arizona, and a narrow strip of western Colorado and New Mexico, and entitled by Major Powell the

"Plateau Province"—which is unique upon the globe. On the east is a country of gigantic mountain ranges, with cultivable soil and perennial streams; on the west is a low desert, broken by short rugged ranges, with alkaline soil and shallow streams sinking in the sands. The plateau district is a table-land, generally from one to two



SCENE ON THE MUKÚNTUWEAP (LITTLE ZION RIVER).

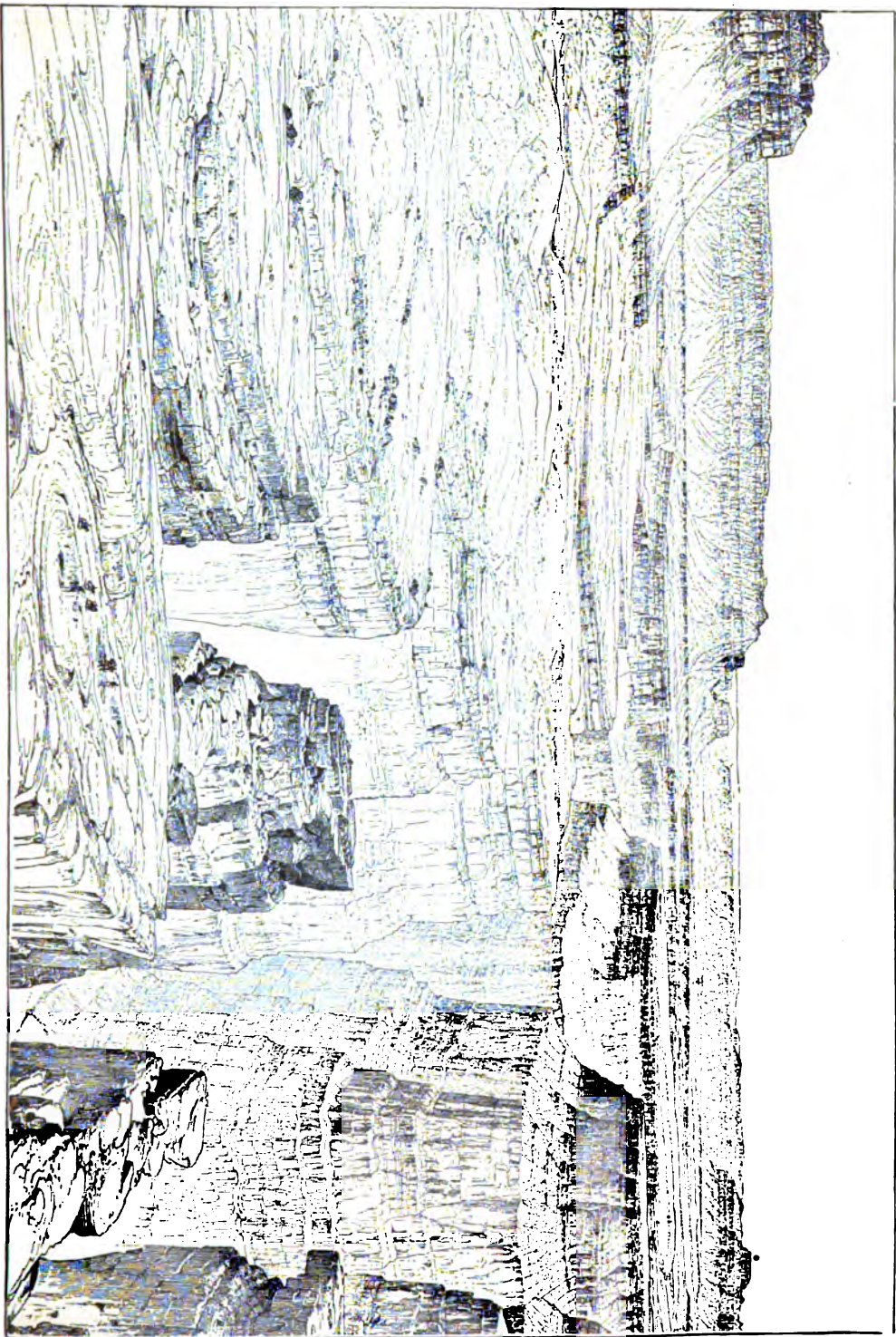
miles above the sea; the barrenest of deserts at levels under 7000 feet, but cool, moist, grassy, and forest-clad on the higher planes. Its characteristic features are the Titanic architectural forms into which the elements have chiselled the face of the land.

From whatever direction approached, the scene is one of startling novelty. Instead of the gently sloping valleys, or the mountain ridges and conical peaks, which are familiar to many, the eye beholds a succession of horizontal terraces and plat-

forms, each ending abruptly in inaccessible cliffs, and dropping thus upon other plateaus many hundreds of feet below. The walls of these cliffs are not chaotic in shape and neutral in color, as usual, but symmetrically carved and sculptured, and gorgeous with the richest hues of many-colored stone,—belts of brilliant hues, red, chocolate, purple, and lavender, set off with alternating bands of gray. Nor do they present unbroken fronts like the ordinary mountains: the infinite rills of rain or melting snow, and the sand and gravel they bear along, have channelled them into deep promontories, and, interlacing, have cut off grand “buttes” or hillocks of stone, sometimes a mile or more from the main body of the cliffs. Immense as are some of these buttes, they sink into insignificance when viewed from a distance, and seem but mouldings or finials on the colossal mass behind.

The feeling of having been transported to a new world is not diminished when one views the channels through which the waters of this district rush to the ocean. The vast undulating rocky surface of the plateaus is veined throughout with clefts extending thousands of feet below to the primitive granite itself, and these form the drainage system of all this “province.” One or two of them carry sufficient streams and preserve courses of sufficient length to be dignified by the name of “rivers”; but the great majority are short and empty gorges, many of them gradually filling up with the débris washed from above. They are one extreme of the scale of which the Amazon is the other, with its enormous reservoirs of spongy forest and meadow, millions of square miles in extent, and on which western New England—largely a collection of the steep narrow ridges of petty brooks—is well along toward the plateau end. In the latter even the brooks have almost disappeared, from the fact that physical conditions have frustrated every advance toward the formation of a soil which could maintain vegetation and permanent reservoirs of water, leaving only naked rock surfaces to be swept and gullied by passing storms or melting snows; and, instead of flowing clear or laden with soft mould, the rains bear along a load of sharp sand washed from the rocky face of the country, down which they pour in unobstructed volume and violence, deepening any casual hollow to a steep rock-channel.

All the veins of this enormous system, ramifying by thousands in every direction, converge to one great system eight hundred miles long; that of the Colorado, whose channel—the most stupendous and magnificent portions of it known as the Grand Cañon and the Marble Cañon—is the noblest example of this remarkable formation. Taking that name from the junction of the Green and Grand, like them it is a foaming torrent in a steep narrow channel sometimes more than a mile below the banks, if banks they can be called, having for many miles a descent of eight feet to the mile; and where the lateral channels cut its walls, the architecture is startlingly like that of human hands in its definiteness and precision,—towers, pinnacles, gables, ruined castles, burning cities where the setting sun shines through broken gate-ways and crumbling windows. It must not be supposed, however, that the “Province” is merely a series of huge floors veined with abysmal channels; there are series of different levels like Titanic stairways. The Grand Cañon is a fine example of this. It consists of two distinct vertical sections, an outer and an inner chasm: the former very far the grandest in every respect, from four to a dozen miles in width and half a mile to a mile in depth, bounded by a magnificent mural front of architectural forms, buttes and gables and temples, and recessed by vast amphitheatres setting back into the serried walls; the latter a gorge of simple form, from 1000 to 2000 feet deep, with retaining walls of comparatively unbroken profile. The Colorado forces a passage



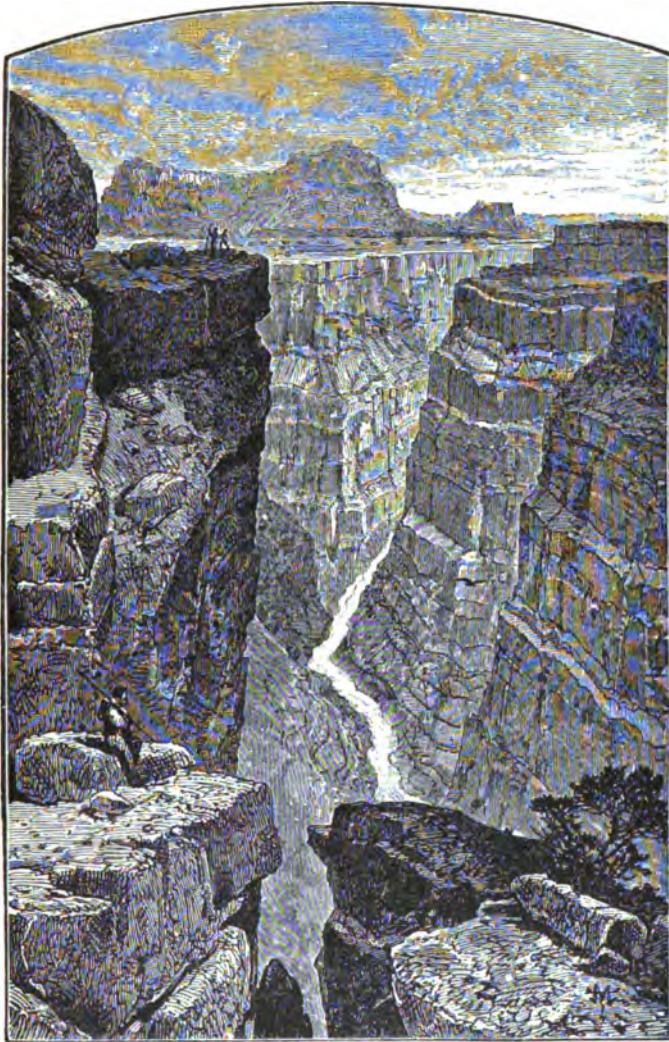
THE GRAND CAÑON AT THE FOOT OF THE TOROWEAP VALLEY.

through a mountain wall a mile in height, and, emerging into the southern portion of the Great Basin, flows with banks only a few hundred feet high through this torrid desert into the Gulf of California. Its main arm is the Green River, rising in Wyoming, whose strangest freak is the "Horseshoe Cañon," illustrated above. Entering the Uintah Mountains by the Flaming Gorge, it emerges by the magnificent cañon of Lodore, and flows along their base for a few miles; then it suddenly turns westward and ploughs in their side an eyelet-shaped gorge 2700 feet deep, coming out again and resuming its course at the foot of the range. Of course this singular channel is due to the fact that the river existed before the mountain wall rose slowly up in its path, and simply held to its course, — setting back and flowing over the lowest point, — and wielded its gritty weapons to deepen its bed as the rocky ridge kept on rising.

Not less wonderful in character or splendid in beauty are several of the cañons which open into the Colorado chasm: some dry except in storms, some containing small tributary rivulets. That remarkable river receives few and scanty tributaries; of those which feed it with permanent waters, the San Juan, the Colorado Chiquito or Little Colorado, and Cataract Creek, from the south, and the Paria and Kanab Creek from the north, are the chief, and are full of surprises and delights to the eye. Kanab Creek forms one of the most stupendous and impressive gorges in the whole plateau region, and the Toroweap valley (a dry channel) is little inferior in grandeur. The Water Pocket Cañon, lying in south-eastern Utah to the north of the river, presents at the top a singularly rolled and curved conformation of strata in place of the usual steep angles, and takes its name from the pools of water which the rains leave in hollows of the ancient river-bed. But none of them, not even the Grand Cañon itself, excel the scenery at the head of the Virgin River, which, starting near the Pink Cliffs in south-western Utah, empties into the Colorado some forty miles beyond the outer gate of the Grand Cañon; one of the cuts here represents the scene at the mouth of the northern fork of the Virgin (called also the Mukuntuweap or Little Zion River), where it unites with the eastern fork or Parúnuweap. The latter's course is almost wholly a cleft nowhere over fifty feet wide, and often more than 2500 feet in depth; and the stream has swung its course from side to side like rivers of the caving alluvium, so that it runs for long distances under enormous projecting masses of the mountain wall which shut out the sky.

The district is as full of absorbing interest and value from a scientific point of view as from that of the traveller or artist: scarcely any other part of the earth tells so clearly to the trained geologist the story of its own growth and disintegration. It is not the sculpture or the coloring of these mighty ledges alone or chiefly that is of moment: it is because the work of nature here is so rigidly and even monotonously *regular*, not because it is bizarre, that men of science prize it. Observe the horizontal bands that stretch across the buttes in the first cut: every one of these is a stratum which originally stretched across a vast expanse; the same strata can be traced for hundreds of miles, from the rows of buttes to the masses from which they are separated, and from terrace to terrace. Where a platform a thousand feet above another breaks the continuity, the strata are found in the same order at a proportionate height above, showing that each platform was raised by a slow upheaval; they are not huddled with other strata, or shot in veins through them by fierce volcanic upthrows. The records of organic life which they hold imbedded tell the same story: the fossils found in any given band in one extremity of this district are found in the same proportions in like bands at the other extremity, hundreds of miles away. The physical character

of the whole district, the elevation and denudation of the surface, the nature of the drainage channels, the sculpturing of such curious imitations of human handiwork, have all proceeded in accordance with rigid laws of geologic action, which can be studied in more naked and unconfused performance here than anywhere else.



INNER GORGE OF GRAND CAÑON, FOOT OF TOROWEAP.

Much of the "Province" will never be trodden by the foot of man ; since not only are countless thousands of its labyrinths and cliff faces inaccessible except at incredible cost and labor, but their number and substantial uniformity destroy the zest which attends the scaling of Alpine cliffs, few in number and of towering height. But enough can be penetrated or climbed to satisfy the inmost soul of the artist or the mere sensation-hunter, the geologist or the poet. Its heart cannot at present be approached by rail nearer than a hundred miles, nor can the finest part of the Grand

Cañon; and there is not much probability that they ever will be. The nearest railroad point to the latter is Peach Springs, on the Atlantic & Pacific Railroad, where a stage connects for the westernmost part of the Grand Cañon, 18 miles away, at a point just before it passes through the tremendous gate-way of the "Grand Wash" and emerges into the Great Basin. The finest section, however, is from one to two hundred miles from the railroad, and can only be reached by a regularly equipped exploring party. The section on the Green River is pierced by the Denver & Rio Grande, and the traveller fancies for many miles together that he is passing a succession of fortresses with sentries on the battlements. On the west, the Utah Central, ending at Frisco, forms a point of approach along the outer edge of the Wahsatch Range. But the only real way to penetrate the secrets of the plateau district is not a hasty run to and from the railroad, but a properly equipped expedition. The "Province" is not absolutely destitute of civilized life: here and there, where a spring or a permanent stream makes life possible, a stray Mormon village or mining camp may be found; and the best starting-point for an exploring party is the village of Kanab, the base of operations for the United States Geological Survey, situated in the heart of the "Province," on the only living stream in all the vast section between the Paria and Virgin Rivers, and reached by a road leading directly south from Salt Lake City.

Arizona and New Mexico. — Historically, this region belonged to the Aztec group of Central American Indians, whose tractability of temper and advance in civilized arts made their enslavement by the Spaniards possible; it still retains most interesting settlements of these aborigines, — known as "Pueblos," or city Indians, from their great communal residences and village life, instead of nomadic habits and residence in wigwams, — its scant white inhabitants are mostly Spanish and half-breeds known to the English as "Greasers," and it was part of Mexico till torn away by the treaty of Guadalupe-Hidalgo after the war of 1847, and extended south of the Gila River by the Gadsden purchase later on. Physically, it is a tropic country modified by the elevation of most of it, but with even the peaks not permanently snow-clad, and no real winter, but rather a short wet season and a long dry one, with scanty rainfall and few and shallow streams; on the east the beginning of the great plains of western Texas, diagonally through the centre the main chain of the Rockies, with peaks as high as 14,000 feet, the remainder of the region a vast plateau several thousand feet high in the north but sinking by terraced mesas to near the level of the sea in the south, the whole crossed by great transverse spurs from the mountain chain, here often called the Sierra Madre. To the east form and flow the Rio Grande and its affluent the Pecos, — the former rising in Colorado, flowing through the San Luis Park, and, after a course of 1750 miles in a basin of 240,000 square miles, emptying into the Gulf, forming for hundreds of miles the boundary between Mexico and the United States. Its course in New Mexico is through a high plateau, sterile without irrigation, richly fertile with it. West of the mountains, through the heart of Arizona flow the Colorado Chiquito or Little Colorado, and the Gila of 650 miles, both feeding the Colorado, the former entering it in the north at the beginning of the Grand Cañon, the latter in the extreme south-west near its mouth, in the midst of torrid plains, the hottest region in all North America except the lowlands along the Isthmus. The mountains are heavily wooded with pines and cedars and junipers; but along the plains there are but scanty growths of greasewood, stinkweed, and sagebrush, mesquite and cotton-wood, agave, yucca, and cactuses. The mountains are rich in mines of precious metals and precious stones. Arizona's mineral resources

are boundless, including silver in large and easily worked veins, copper deposits among the richest of the globe, gold mines, and iron deposits that in some instances are mountains of ore. In the north of both territories garnets are obtained, the finest in the world, rivalling even those of the Cape of Good Hope; and the celebrated agatized and jasperized wood of Arizona is much richer than that of any other locality.



A LATERAL AMPHITHEATRE.

Irrigation, and the great railroad lines which have connected the United States with Mexico, are rapidly making the once torrid desert of New Mexico blossom with wealthy plantations and flourishing towns. It is still mainly a country of stock-raising: hill-sides, mesas, and valleys alike are covered with rich grass, and Spaniards, Indians, and settlers of English blood alike maintain great ranches of horses and cattle. The chief drawback has been the terrible want of water: in some of the leading

towns, till water was brought from the mountains, it was sold by the gallon at a high price; three-fourths of all the farms in 1890 (4174) depended upon irrigation. The fruits raised here are of remarkable size and beauty and the grape yield is enormous.

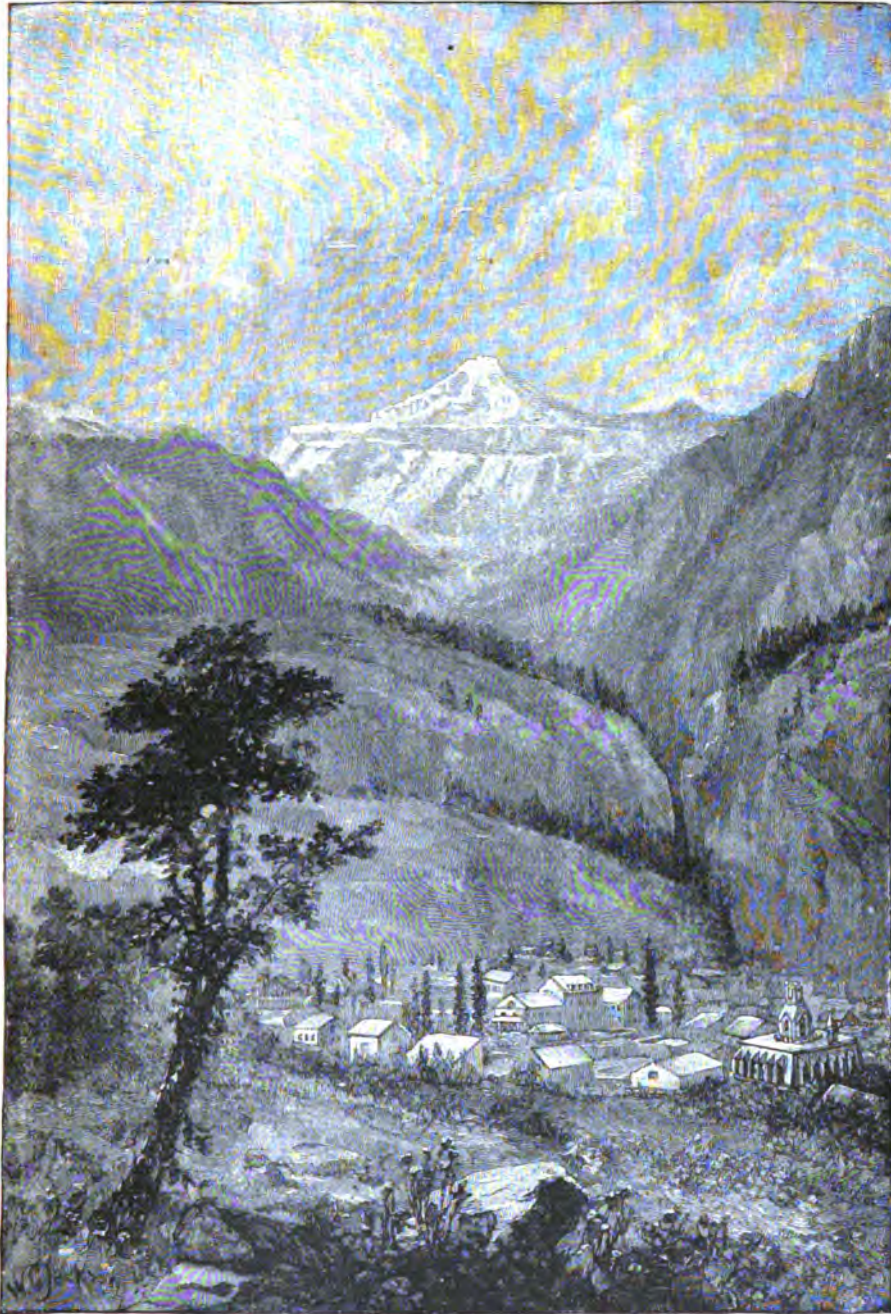
The oldest settlement in this region, and except St. Augustine the oldest in all the United States, is Santa Fé the capital of New Mexico, founded by the Spaniards in 1582; a place of about 6200 people, on a creek which flows into the Rio Grande. Like all the old towns of this section, it is built of *adobe* or sun-baked brick, durable enough in a land of few and scanty rains; its business centre lying around a public square or *plaza*, and the streets unpaved, narrow, and crooked. Las Vegas (2400) to the east is a market town, and down the Rio Grande in the centre are Albuquerque (3800) and Socorro, villages rapidly growing to important cities on the line to Mexico.

Arizona has no large towns. Prescott, the capital, a market for wool and bullion, lies in a high valley of the Pine Mountains; Tucson, the largest place (5000), an old Jesuit mission settlement, dates from nearly as far back as Santa Fé; Yuma on the Colorado, Phoenix, and Florence are of local importance.

These sections are the only ones now left in the United States where the settlers are still subject to all the horrors of savage Indian warfare. Some of the tribes, however, are making good progress in civilization: the Navajos, occupying a reservation of over 5000 square miles in northeastern Arizona and northwestern New Mexico, have doubled their numbers within a generation, — increasing from 10,000 to 20,000, and are notable stockmen and weavers of blankets, etc. The most interesting to ethnologists and archæologists, and the most respectable in themselves, are the Moquis and Zuñis, remnants of the "Pueblo" tribes, still living in huge communal houses several stories high, entered by ladders to the roof, — peaceable agriculturists and domestic manufacturers.

New Mexico is estimated at an area of 122,580 square miles, with a population of 153,593 of whom some 21,000 are Indians and 100,000 Spaniards or half-breeds; Arizona's area is 113,020 square miles, and its population in 1890, 59,620, a third Indians and the remainder mostly Spanish.

Texas. — The Mexican province proclaimed an independent republic by an English-speaking population of 20,000, in a territory nearly twice the size of France and more than six times that of England, gave up 100,000 square miles of its limits to the United States; but the remaining 265,780 square miles is with astonishing exactness four times the size of New England ($66,465 \times 4 = 265,860$), has never suffered division, and its rich loam is with enormous rapidity drawing a population — rising from 818,579 in 1870 to 1,591,479 in 1880, and to 2,235,523 people now — which may make it yet the Empire State in numbers. It is mainly a prairie State, with its vast extent between the parallels of latitude — more than eleven and a half degrees, or some 650 miles — giving it a range of climates from temperate to tropic; but it is essentially tropic, bathed by the warm waters of the Gulf, — a State of sugar and rice and cotton, of oranges and lemons and figs, as well as of tobacco and cereals. The coast is a line of sand-spits, where the finest sea-island cotton grows, with shallow interior sounds and bays; rising through the centre, its main bulk is a rolling prairie, with a belt of post-oak and black-jack forest in the north called the "cross-timber," extending into the Indian Territory; and on the west it rises to the high plateau of New Mexico and the foot-hills of the Rockies, with short mountain spurs and a broken country. Along the New Mexico line and extending into it is the *llano Estacado* or Staked Plain (from the yucca-stalks growing on it), — a waterless, treeless, verdure-



SAN JUAN IN THE SIERRAS.

less plateau from one to five thousand feet high. The river-bottoms are wooded with a varied growth of which the most tropical are the magnolia, cypress, and cedar, palmetto, cotton-wood, and willow pine, pecan, sycamore, and mesquite; and along the barren banks of the Rio Grande the stunted growth of mesquite and post-oak becomes

rather a tangled copse-wood than a forest, and as *chaparral* acquired in the Mexican War a terrible familiarity which it has never lost.

The State is watered with great rivers running southerly and south-easterly through its whole heart. Its Mexican boundary is the long Rio Grande, navigable for some 500 miles, but swift and crooked and obstructed by rapids and sand-bars; its boundary with Louisiana is the Sabine of some 500 miles, navigable for small steamers for 400. Into the bay called Sabine Lake, which receives the last-named river, flows also the Neches of 350 miles; Galveston Bay farther along the coast receives the Trinity of 500; the Brazos of 950 miles, the largest river of the State and its whole course within its limits, has its mouth directly on the Gulf; the nearly equal Colorado of 900 miles opens into Matagorda Bay, which also is the embouchure of the San Antonio flowing past Goliad, — historic names, — fed by the Guadalupe of equal length entering it only nine miles from its mouth; and Corpus Christi Bay is the receptacle of the Nueces of 400 miles. All the larger of these are navigable at high water from 250 to 400 miles.

Despite its immense growth, Texas as yet has developed no business centres of surpassing size. Its leading seaport, the principal commercial point between New Orleans and Mexico, is Galveston (29,000), on an island thirty miles long and three miles broad, — only four or five feet above the sea, which more than once has rolled upon it in a gigantic wall and threatened to sweep its contents from the earth as it has done to smaller places, — at the mouth of Galveston Bay, a sheet of water 35 miles from the ocean to the mouth of Trinity River. It has steamer lines to the West Indies, Europe, and the North, and its commerce is of immense volume.

The second place, of about 38,000, is San Antonio, whose nucleus, the Alamo, is famous in Texan annals for the slaughter by the Mexicans of the chiefs of the republic; it lies on the San Antonio River, and is a flourishing market centre. Houston the fourth city (27,500) is a manufacturing and commercial city not far from Galveston Bay. Austin the capital (15,000) is the head of navigation on the Colorado. Dallas (38,000) on the upper Trinity is the leading city of the State; Fort Worth (23,000) a little higher up the same river, Marshall (7000), and Jefferson (3000) on Caddo Lake near the Louisiana line, are the other chief places in this section.

The Indian Territory. — Besides the many reservations in the West devoted to Indian tribes, — some of them as large as the State of Maine, and not one with so many as 21,000 Indians on it, — the government had set apart one great tract of 64,690 square miles north of Texas and west of Arkansas exclusively for special Indian reservations; but by the creation of the Territory of Oklahoma, which occupies the centre and west, the Indian Territory is now reduced to 31,400 square miles. Here are gathered, each on its own domain, the remnants of tribes from North, South, and West; the most important and progressive being the kindred nations of Creeks, Cherokees, Choctaws, Chickasaws, and Seminoles, — the chief of the others being the Cheyennes and Arapahoes, the Kiowas, Comanches, and Apaches, the Osages, and the Wichitas. Each tribe has its own government and administers its own laws, except that the United States courts take cognizance of cases where white men are involved, Indian Territory being annexed to the western judicial district of Arkansas. The first five named are called the "five civilized nations;" the others rove over lands set apart for them, but not patented to them. in what is now the Territory of Oklahoma. The Cherokee nation has a regular system of representative government with a legislative assembly meeting at Tahlequah.



RESERVATION INDIANS

The government maintains its relations with them by means of "Indian agents" appointed by the President and confirmed by the Senate.

Oklahoma. — The Indians of Indian Territory were slave holders before the Civil War, joined the Confederacy and sent a body of troops to the conflict. In the readjustments following their conquest by the government forces, the United States purchased vast tracts of unoccupied land in the centre and west of the Territory, for the purpose of settling freedmen and wild Indians on them. The district of Oklahoma, in the centre, covering about 3000 square miles, was included in the purchase. As this desirable section was left unoccupied, the whites maintained it to be public land and consequently available for settlement; while the Indians took the ground that its occupancy, by the conditions of the sale, was limited to freedmen and wild Indians. A steady wave of attempted squatter encroachment beat against it, and only military force prevented its seizure by the whites down to 1889, when the government bought it again, and 1,900,000 acres were proclaimed by the President open to settlement. Throngs of settlers rushed in and towns sprang up with amazing rapidity. The census of 1890 returned the population of the Territory as 61,834, including Greer County which is claimed by Texas. Since that enumeration, there has been a constant influx of people and it probably has at present 80,000 inhabitants. The chief towns (census of 1890) are Oklahoma City (4511), Guthrie (2788), East Guthrie (2141), and Kingfisher (1134), all in the original district. The area of the Territory, including the Cherokee country and No Man's Land, is 39,030 square miles.

California. — Stretching for 750 miles along the Pacific Coast, from the latitude of Cape Cod to the latitude of Charleston, from the heart of the semi-polar to the heart of the semi-tropic belt; 200 miles in breadth, rising from shores bathed by the warm waters of the Kuro Shiwo to the snowy heights of the Sierra Nevada, the very passes through them six or seven thousand feet high, and lakes on the lofty plateaus ringing with the skater's steel while the dwellers in the plains below are swinging in hammocks and cooling themselves with fans,—this giant State of 158,360 square miles, nineteen times the size of Massachusetts and more than two and one-third times that of all New England, has a climate peculiar to itself: with a mean temperature like that of the middle Southern States, but far more equable, with a brief rainy season and a long cloudless summer, and nothing resembling winter except the eternal winter of the mountains. In the northern part it is often damp and chill, foggy and with a heavy rainfall; in the southern it is sometimes too hot for endurance, and often breeds a mood of languorous repose; but it is on the whole perhaps the most perfect in America.

A strip of plain and plateau along the coast, rising swiftly to the long low Coast Range, rarely over five or six thousand feet in height; a broad rich valley of 25,000 square miles through the heart of the State, more than 400 miles long by 50 wide, drained from the north by the Sacramento and from the south by the San Joaquin; a rocky volcanic basin on the north 500 feet above the sea, without drainage and full of shallow alkaline lakes (except where Klamath Lake, 44 miles long by two to a dozen wide, lying mostly in Oregon, drains to the ocean by the crooked cañon of Klamath River), another on the south, of lakes and marshes (including Tulare Lake, 33 miles long by 22 in width); the great "Colorado desert" of sand in the south-east, 150 miles long by 70 wide; and the sides of the mighty Sierra Nevada, wooded thickly to the line of snow,—this is California. None of its interior rivers are large or navigable: the chief drainage of the Rockies flows around it, the Colo-

rado forming its south-eastern limit, the Columbia's course running far to the north. But the peaks of the great mountain chain are scarcely less imposing than those of the main Rockies themselves, — Shasta reaching to the height of 14,442 feet. Tyndall 14,386, Brewer 13,886, Dana 13,277, Castle 13,000, etc. The coast is mostly harborless, and little indented except for broad sweeps of bay; the one great exception is one of the finest harbors in the country, and has built up one of the leading commercial cities of the continent.

California is a land of scenic surprises, of extravagant *tours de force* of nature, of the marvellous in volume, of varied bigness. Its red-wood trees grow sometimes to



A STREET IN SAN FRANCISCO.

400 feet high and more than 100 feet in circumference. Its cultivated plants and fruits grow to a size that staggers credulity. Its bears are the largest animals dangerous to man, its vultures are the largest flying birds in America. Its cataracts are the most stupendous in the world in height: in the wonderful Yosemite Valley (a national park), Yosemite Creek plunges 1500 feet in one leap, and 1100 more in two further descents. The Merced and Nevada fall little short of this, and their volume is much greater; and the Tuolumne falls 4650 feet in 22 miles. This famous gorge, the Yosemite, 4060 feet above the sea, is walled around by mountain summits and perpendicular crags of surpassing grandeur, some of them with sheer rock faces 1000 to 1500 feet high, and rising altogether to 5000 feet above the valley, over-

looked by Mount Dana more than 9000 feet above. Nestled high in the mountains are beautiful lakes of crystal purity, with no outlet to the sea, but with waters fresh and sweet.

The home of Indian tribes of low development and pliant character, first gathered into "missions" by the Spanish Jesuits, then by the Franciscans, and living in great comfort and practical affluence, though not at all fitting for future self-reliance, till white adventurers came about the time of the Mexican War, — California was for many years known only as a "gold State," the discovery of gold in a Swiss squatter's mill-race in 1848 having brought down an enormous avalanche of immigration, almost wholly of gold-hunters without families; the missions were broken up and the Indian communities plundered shamelessly; the population increased at the rate of 25,000 a year, amounting to a quarter of a million in the middle of the next decade, but in such a fearful state of uncontrolled anarchy amid a crew of ruffianly gamblers that a voluntary secret organization called the "Vigilance Committee" assumed the reins, and hanged and banished desperadoes till the legal power became strong enough to assume control. Till within a few years the mining interest was dominant in the State, and permanently ruined vast quantities of the finest land in California by burying it under the hill-side earth washed down in placer-mining; but the agricultural interest has finally triumphed, — as it must, for it is enormous in this section of rich land and tropic luxuriance of growth. In the character of its special industries it approaches more closely to Southern Europe than any other part of the United States. Its vintages are vast in quantity, and are exported to France in enormous volume every year for uses easily imaginable, and the finest ones rank with all but the choicest imported wines; and the drying of raisins, prunes, and figs is a heavy industry. Oranges and lemons, citrons and pomegranates, figs and olives, are raised with ease; silk and tea are well founded hopes of the future; peanuts and tobacco are grown. In wheat and wool it ranks among the first; and its honey yield is immense, the enormous beds of wild-flowers along the southern mountains furnishing the choicest food for bees.

Its mines and new lands have made its population a wonderful *mélange* of every civilized strain of blood, though not perhaps much more than in other States; but some of its elements are from its location almost peculiar to itself. The most dreaded of these are the Chinese: of such teeming populousness that it is feared an unrestricted immigration would overwhelm the Pacific Coast with millions of unasimilable foreigners, not only deeply alien in speech and religion, but of too ancient a culture to yield it up and melt into the American mass as do the members of most other races. Law after law has been passed restricting their entrance, and they are forbidden the rights of citizenship; and the steady hostility of the masses has prevented them from being more than an insignificant factor, — not above 75,000 out of 1,208,130 inhabitants, and not increasing. Under the present United States laws, no Chinese mechanics can enter the country, — merchants, professional men, and government officials not being excluded. This prohibition was enacted in 1882 for ten years.

California's great city is San Francisco, whose harbor is the only good one on the Pacific coast for 2000 miles, — from Victoria to Mazatlan in Mexico, — except that of San Diego in the extreme south of California. San Francisco Bay is a noble sheet of water, 55 miles long parallel with the coast, and 3 to 12 in width, entered through a channel two miles wide called the "Golden Gate"; and on the southern peninsula

half a mile wide formed by the bay and the ocean stands the city of 297,997 people, where forty years ago there were but 450 in the village then called Yerba Buena. It is the New York of the Pacific slope, with its commerce directed toward Asia and Australia rather than Europe and the West Indies; and dozens of steamships ply regularly to China and Japan, the Sandwich Islands and Australia, Mexico and Panama, and Puget Sound. It is the grand central exchange and mart of the mining districts and of the commerce of the Pacific Coast, a vast centre of capital and financial transactions; and its cool ocean breezes make it a valued resort from the summer heats of the interior. It has a Chinese population of 20,000. Seven miles off across the bay is Oakland of 48,700, built up by the same traffic, and largely a residence suburb of San Francisco. Sacramento the capital (26,000), at the head of large-steamer navigation on the river of its name (but with navigation by smaller steamboats far above and along the Feather), is a supply station for the mining sections, and a city of manufactures and smelting, and also of beautiful perennial flower-gardens. Marysville to the north is the head of navigation on the Feather. San Jose (18,000), on the Guadalupe near the lower end of the bay, a city of manufacturing and gardens and an agricultural centre, is the only other important place in Central California. The emporium of Southern California is Los Angeles (50,000), on a little stream of its name nine miles from the ocean; rich with flowers and vineyards and groves of orange, lemon, and fig, and with a climate of ideal perfection.

Oregon. — Bold rocky shores, pierced now and then with the estuaries of slender streams, — the Rogue and the Umpqua, with narrow and winding but rich and lovely valleys rising to green-wooded mountain sides, the Yaquina, the Coquille, and others; to the east, a heavily forested plateau in the north, prairie broken by hills and groves in the south; then the low Coast Range, called the Umpqua along the course of that stream; east of this, in the northern half the garden of the State, the broad and beautiful valley of the Willamette which feeds the Columbia, once the southward extension of that noble inlet, Puget Sound; eastward still, the great Cascade Range, which is only another name for the Sierra Nevada, rising northward into snow-clad volcanic peaks, of which Mount Jefferson is 10,200 feet in height, and Mount Hood looking down on the Columbia is 11,225, — and its western sides clothed to the snow-line with a dense green forest; eastward still, occupying two-thirds of the State, an enormous open and rocky plateau, extending to the appalling inaccessible cañon where the broad torrent of the Snake roars in rapids that can never be stemmed through a channel of precipitous crags sometimes five thousand feet deep. In the north-east, broken ranges inclose fertile watered valleys of several hundred square miles in extent, — the Umatilla, the Grande Ronde, the Powder, and others; and on the south is the continuation of the great volcanic plateau of Northern California, undrained to the sea, and full of small shallow saline or alkaline lakes. The interior navigation of Oregon is by light steamers on the Willamette for 200 miles of its course of 300, its continuity broken by a fall; the Snake on its eastern border, powerful in volume, is utterly unnavigable; but its coast has good harbors, and the broad and deep Columbia is navigable for 400 miles despite the dangerous bar at its mouth, the Cascades, and the rapids of the Dalles where it pierces the Cascade Range.

Oregon has within its 96,030 square miles a variety of climates almost equal to those of South America. All the North Pacific coast, where the warm vapors of the Kuro Shiwo meet the breath of the poles, grows more and more heavily enveloped in fog and mist and heavy protracted rains; and the rainfall on the Oregon coast and

along the Columbia is from 50 to 60 inches, making it a land of forests but softening the northern winters. In the interior valley the rainfall is less, — from 37 to 44 inches, — but the climate is typically far-northern, with hot dry summers and intense winter cold; while on the great eastern plateau it is only 10 to 12 inches, rising to 20 on the mountain-ranges.

"Lumber, cattle, and salmon" condenses the great activities of Oregon into a sentence. The vast plains covered with bunch-grass form natural pastures for great herds of cattle, and Eastern Oregon is next to Texas the greatest cattle market on the continent, furnishing the stocks of the ranchmen of Montana and Wyoming and Colorado. The pines, red-woods, and spruces grow to heights only exceeded by those of California, — near 200 feet, — and of the best of qualities. Over forty salmon canneries on the Columbia (chiefly employing Chinese), taking from the fisheries on the bar below Astoria 25 million pounds of the finest salmon in the world during the three months' season, send their excellent product all over the world. Gold and silver mining is also extensive and profitable.

Oregon's chief city is Portland, containing about 46,000 of the State's 313,767 souls: the leading port of the northern Pacific slope, on the Willamette 12 miles from the Columbia and 100 from the ocean, — a mart of grain and lumber, a manufacturing place, and with a growing commerce with American and British ports on Puget Sound. Salem the capital (7000), Oregon City, Albany, Eugene, and Corvallis, are all on the Willamette; Astoria (6000), an old fur-trading post dating from 1811, is near the ocean, on the broad estuary mouth of the Columbia. The Dalles is at the famous rapids of the name. Forest Grove is the seat of an industrial school for Indians, doing the noble work which all such institutions are accomplishing.

Oregon was once a seat of some posts of the Hudson's Bay Company, and till 1833 was inhabited mainly by Indians, trappers, French-Canadian bush-rangers, and Celtic-Scotch employes of the fur-trading companies. It was organized as a Territory in 1848, and admitted as a State in 1859.

Washington. — This northwestern corner of the United States, with 69,180 square miles of area and 349,390 inhabitants, admitted as a State in 1889, is a continuation of Oregon, with some of its peculiar features exaggerated and some of them modified after crossing the Columbia. The portion lying between the ocean and the Cascade Range is known as Western Washington, and comprises two-fifths of the whole: a hilly plateau of heavy rains and dense forests of gigantic evergreen timber (the Coast Range continuing through it and rising to 8000 feet in Mount Olympus at the north), with a rocky coast pierced by two great bays forming excellent harbors, — Shoalwater Bay and Gray's Harbor, — on the south the Columbia, on the north eighty miles of the broad deep quiet waters of the arm of Puget Sound called the Strait of Juan de Fuca, and through the northern centre a hundred miles of the ramifying spurs of that noble sound itself: a land-locked arm of the sea from five to twenty-five miles in width, of depth far beyond the draught of the heaviest ship, and embosomed in a basin of sheer rock so steep that the sides of a vessel may grate against the bank and its keel ride free, — a broader Saguenay, with narrow fiords radiating from it far into the land, and interlocking arms embracing large green islands. This is the seat of the State's business and future; to the east are the high sterile plains of the Spokane Plateau in the northeast, future great cattle ranges like the corresponding section of Oregon, and the Klikitat Prairies in the south; though the valleys of the Columbia which meanders through the heart of this district, and of the Snake its almost equal

affluent, are fertile and watered by numerous smaller streams. The two sections are divided by the Cascade Range, whose volcanic peaks (some of them hardly yet extinct) parallel the Rockies themselves in grandeur, the mighty Tacoma's¹ snowy peak reaching a height of 14,444 feet, Mount Baker, 10,500, and Mount St. Helen's 9751 feet.

The State shares the advantages and business of the lower Columbia with Oregon, and for small steamers that powerful river is navigable four hundred miles above the rapids of the Dalles. Rising in British Columbia, this river in a course of 1250 miles has a drainage basin of 298,000 square miles, with navigable reaches of 725 miles, three times interrupted by rapids,—at Priest's Rapids, the Dalles, and the Cascades; it receives one affluent—the Snake—of above a thousand miles in length, and no inconsiderable feeders in the Okanagon of 300 miles (a string of expansions called lakes) and the Spokane of 120.

The business of Washington is chiefly in saw-mills and lumber along Puget Sound, and canneries on the Columbia; and the business development is almost wholly along the sound and the river. The largest place is Seattle (43,000), on the eastern shore of the sound, with a fine harbor; Olympia (5000) the capital is at the extreme point of its southernmost arm; Tacoma (36,000) is at the head of easy navigation, with important lumber and smelting interests. Walla Walla (6500) is in the southeast, somewhat east of the great bend of the Columbia, and Spokane Falls (20,000) in the east.

Idaho.—In some regards this State of 84,800 square miles, with only 84,385 inhabitants (including a large Mormon element), belongs to the Rocky Mountain group of Montana and Wyoming; but its drainage is all to the Pacific, its northern "pan-handle"—determined by the Rocky and Bitter Root Mountains—is part of the Spokane and Snake plateau rising to the Rockies, and its southern portion is a tremendous black lava desert 400 miles long by 50 miles wide along the Snake, which has cut its channel through it, part of the lava eruption which covered 200,000 square miles in Northern California, Oregon, Washington, Idaho, and Wyoming, on the Pacific slope. In this lava plain rise three neighbor hills, ancient craters, called the Eastern, Middle, and Southern Butte, familiar to immigrants on the Salmon River trail for many a year. Farther on rise a chaotic group of mountains and valleys and plateaus and cañons known as the Salmon Mountains, pierced by a long easy slope known as the Wood River pass; north from this water-shed flows the Salmon River, which, circling through the mountains, joins the lower Snake after 450 miles of course in a valley of exceeding beauty; and southward flows the Wood River, joining the Snake also in its earlier course. This powerful stream (called by the Indians the Shoshone) rises in Wyoming, but flows in a gigantic horse-shoe for 850 miles through Southern Idaho, through deep sheer cañons a thousand feet in depth; of a series of magnificent cataracts, the most imposing are the "Shoshone Falls," among the grandest on the globe, where the river, 600 feet wide in a circular amphitheatre, divides around five islands, and re-uniting, plunges over a semi-circular precipice 200 feet in height, with a volume in flood seasons nearly equal to Niagara.

Idaho has no one climate: its southern desert is almost rainless; its mountains and mountain valleys are fairly watered; its sheltered valleys are of temperate range of heat and cold, its hill-sides and plateaus are bitterly cold and buried in snow for much of the year, and on the mountain-tops the snow and ice are perpetual. Nor has it any one special industry to give it sudden growth: good grazing plains attract many herdsmen, good watered or irrigable soil will support its mining or manufactur-

¹ This, the native name, is superseding its appellation of Mount Rainier.

ing workers, good forests in the northern portions promise lumbering industry, rich mines have made it of some note as a mining section : all together insure it a solid and prosperous future. It was admitted into the Union as a State in 1890.

There are no large places. Boisé City, the capital (2500), is in the southwest not far north of the Snake, on an affluent called Boisé River ; Lewiston (850) is on the Snake, at the Washington border and the mouth of the Clearwater ; Silver City is south of the Snake near the Oregon border.

Alaska. — This tremendous waste of 531,000 square miles — a fifth the size of all the rest of the United States, some eight times as large as New England, sixty-two times the size of Massachusetts — is in its political sense a narrow strip along the coast to the west of Northern British Columbia, a huge block extending from the North Pacific to the Arctic and from 141° west longitude to Behring Strait, a long western peninsula extended by a thousand miles of volcanic islands marking off the shallow Behring Sea (250 feet deep and filling up with mud), and a few other trivial islands worth more than all the rest of the Territory together. With 1200 miles of diameter from Dixon Sound at the south to Point Barrow in the Arctic, and about 800 of breadth, it has 7860 miles of coast-line ; it is 2000 miles from that sound to Attu Island at the westernmost end of the Aleutian chain, and more than 3000 from the same island to San Francisco. In all this weary stretch of a third the distance around the globe, lying on two great oceans and a land-locked sea, there were in 1890 counted 31,795 permanent dwellers, — 4303 whites, 12,784 Inuit, 2310 Aleutians, 1819 "Creoles" (Russian half-breeds), and the remainder "Indians" of the Thlinket and Athabascan tribes, Mongolians, etc.

The entire 2000 miles of the Pacific Alaskan coast and the Aleutian Islands are composed wholly of a continuation of the Cascade Range, a high volcanic spine with its westernmost craters far from dead, and rising into summits by far the loftiest on the North American continent. For hundreds of miles along the southern coast, hugging it close, — separated from each other and the mainland by deep narrow tortuous channels, through some of which the tides rush in appalling fury and enormous height, but which form as a whole a quiet land-locked passage of 1800 miles from Washington northward to Sitka, — extends the northern portion of that great archipelago of which Vancouver's Island is the southernmost end ; more than 1500 isles of mossy rock and evergreen forest, in size from a mere point up to that of half the island of Britain ; their black precipitous crags beaten on the west by the furious waves of the ill-named Pacific ; their interior a mass of bare rocky ridges and summits from one to two thousand feet in height, clothed near the top with dwarfish bushes and briars and mosses, farther down with thick forests of spruce and hemlock and cedar, crowned with club-mosses and waving ferns, and around and among them a dense impenetrable jungle of brushwood ; sometimes heathery flower-clad moors on the inner plateaus, with cranberries growing thick in the spongy soil. In this archipelago — of which Prince of Wales Island is the largest, followed by Baránoff Island, on which is located Sitka the capital of Alaska, Chitlagoff and Admiralty the northernmost, Ku, Kupranoff, Mitsoff, Zarenbo, Revilla Gigedo, Gravina, etc., and the adjacent mainland, — rains and drizzles, mists and fogs, thunder-storms of snow and sleet, and a couple of months of fair summer weather, make up the year ; 85 inches is about the annual rainfall, and crops will rarely come to maturity ; grass will grow luxuriantly in the few small scattered districts where there is arable soil, but there is not sun enough to cure it for hay.

All the mountainous coast that borders the interior channels of this archipelago is a line of living glaciers; frozen rivers starting from the snowy wind-swept mountain sides and pushing their congealed masses down into the fiords that pierce the rocky shores,—more than 5000 in all, so steadily moving downward to the sea that the snapping ring of their edges breaking off in icebergs as the water buoys and rends them is scarcely interrupted for a moment. At the northern end of the archipelago, where a great inlet called Glacier Bay runs far up into the mainland, five great glaciers find their way along the mountain sides, one of them from three to eight miles wide and fifty to five hundred feet deep, while the land adjacent is buried under a cap of ice from one to three thousand feet in depth.

North of this archipelago begins the gigantic section of the mountain chain known as the St. Elias Alps. On its northern flank is the loftiest peak in North America, Mount Wrangell, nearly 21,000 feet above the sea, its base washed by a torrent of mud and sand known as the Copper River. In the middle is the second highest, equally grand in its snowy majesty, Mount St. Elias, over 19,000 feet in height. On the southern peninsula, looking down on Glacier Bay, are two other magnificent snow-capped landmarks, Mounts Fairweather (15,500) and Crillon (15,900), for many years the grandest of beacons to the Pacific whaling fleets: even more noble in aspect than their mightier brothers, for they rise sheer from the water, their immediate bases high bare rocky shelves or plateaus; while the former are only dominating spots in a crescent range thirty to fifty miles from the coast, with low evergreen plateaus at their feet, and a line of sand-beaches broken by lagoons stretching thence to the ocean, projecting in spits and shoals far into the waves and cut by streams of milky turbid glacier water from beneath the ice-sheets, and rising sometimes into bluffs, pierced by Yakootat Bay, whose shores are one huge living glacier fifteen miles in breadth. The same line of beach and wooded upland stretches back west of the Copper River to the high white wall of the Chugatch Alps, extending northward of Prince William Sound, between which and the immense estuary of Cook's Inlet lies the rocky peninsula of Kenai. The inlet is entered by the "Hell Gate of Alaska" (the Barren Islands, washed by cross-tides of terrific fury): it is a stretch of water 150 miles in length by a breadth at first of forty or fifty, narrowing to ten or a dozen and finally to a mile or two in the fiord called Turnagain Canal, and all the way the tides form a rushing wall of water sometimes fifty feet in height, advancing with a mighty roar and burying the coast-lands deep beneath the waves. On the west are steep rugged mountains, with caps of snow and ice, then naked bands of mossy and heathery rock, then a thousand feet of dark-green forest; on the east is a low expanse of marshy "tundra," forty or fifty miles in width, sparsely wooded along the banks of its few sluggish streams with birch and poplar and spruce; at the end is a district partly of heathery jungly marsh with evergreen forests on the hills, but with several hundred square miles of dry upland plains, the only good agricultural lands of any extent in Alaska.

Continuous with this inlet outwardly is Shellikhoft Strait, dividing from the mainland the great island of Kodiak, the centre of trade and commerce in Alaska; and west of it is the great Ilyamna Lake, the largest interior lake in Alaska, ninety miles long by fifteen to thirty wide,—perhaps a third as large as Lake Ontario; a tempest-tossed expanse, divided from the Pacific side by a mountain wall whose dominating peak is the huge smoking cone of Mount Ilyamna, 12,060 feet above the sea, and emptying into Bristol Bay of Behring Sea by the Kvichak River forty miles in

length, — the mountain portage having long been utilized by Russians to connect the two oceans. For here begins the great peninsula of Aliaska, reaching westward with scant continuity in places till at Krenitzin Strait it breaks, and with Unimak Island begins the series of Aleutian Islands which prolong the volcanic chain — the beautiful cone of Shishaldin on Unimak rising to 9000 feet — in steadily smaller and smaller island masses, — Unalaska the commercial head of the archipelago, Umnak, Atkha, etc., — till they end in Attu a thousand miles away.

The character of Behring Sea and its Alaskan shores is as different from that of the Pacific and its coast as if they were sundered by half the globe; and there is no connecting link, but an instant abruptness of transition. On the Pacific we find savage rocky shores, deep waters, everywhere volcanic formation and the fires not yet extinct, — the islet of Bogasloff, two or three miles in circumference and 280 feet high, was actually thrown up by volcanic action from 1796 to 1825, and in that year was too hot to stand on; on the Behring shore, sand-reaches slowly rising to upland marsh and moor and heathery plains. In truth, the character of the Pacific mountain chain is peculiar to itself, for the interior of Alaska is like the Behring shores: save here and there a wooded ridge continuing the Rockies to Behring Strait or the Arctic, interior Alaska is a vast spongy moor, sunken here and there into ponds and strings of pools and quagmires, and streams with so little current that the wind will change its direction; frozen always to within a foot or a foot and a half of the surface, thawing a few inches in the brief unbearable summer, and swept for months by winds of sixty, seventy, eighty miles an hour, laden heavily with snow and sleet, making the country impassable through the packed snow-drifts even for Innuits or dogs. And the summer thaw brings with it the terrible swamp curse of America, far worse in the Arctic even than the tropic regions, — the mosquito; issuing from the tundra in swarms of such numbers and fury that dogs are killed by their stings around the eyes and paws, bears and deer are driven to the water, and the natives often dare not enter the woods at all, and wear mittens on their hands and skins wrapped about their faces. Over all the nearly half a million square miles of interior Alaska, so far as known, about 1600 Indians live a miserable existence along a few of the greatest streams; nearly all of it is given over to eternal desolation.

Across the Aliaskan Peninsula the Behring shore is pierced by Bristol Bay, a bank of sand and mud with a few tortuous channels and a shallow sheet of water overlying the whole; it receives the clear waters of the Kvichak (the deep and rapid outlet of Ilyamna Lake), the muddy torrent of the great Nushagak, — starting clear and high-banked from its lake, but cutting its lower alluvial banks and making its estuary mouth a perilous maze of shifting sand-bars and mud-flats, — and a dozen or so other streams with broad mouths and loaded with silt. Around its head, in the "Nushagak district," is the great trading centre of the Innuits on the northern shore of the Aliaskan Peninsula and the mainland to Kuskokvim Bay. The latter is an immense estuary of Kuskokvim River (not wholly unworthy a comparison with the Yukon), in which the tides roar in a moving wall whose fury and height compare with those of Cook's Inlet itself. The river flows first clear over a gravelly bed, then clayey white through a vast low moor submerged for many miles at every tide, the eastern side fringed with a bank of coarse sedge and swamp-trees like alder and willow and poplar, along which are ranged the little Innuits villages. North of this district we come to the delta of the mighty Yukon, the Amazon of the Arctic regions: the drainage channel of hundreds of miles of drenched and reeking moor of which it is simply in



INDIAN ENCAMPMENT ON THE GREAT YUKON RIVER.

spots an overflowed portion, twenty miles wide 800 miles above its mouth, — its current tearing the half-submerged swale to pieces and becoming a mass of mud and sods and drift-wood, — and with a total course of over 2000 miles from its sources in the St. Elias Alps. That delta for a hundred miles is an almost impassable labyrinth of winding sluggish channels amid an overflowed marsh dotted with countless islets of sedge and willow bushes; and for sixty miles out at sea the ocean approach is the same delta but slightly under water, an enormous mud-bank which no sea-going vessel dares attempt to pass to enter the Yukon at its mouth: so that the navigation of this tremendous river, pouring to the sea perhaps a larger volume than the Mississippi itself, — with one huge tributary, the Tannanah, probably equal to the Danube, — is confined to petty steamers dragging small bateaux, entering the river by a channel from Norton Sound on the north.

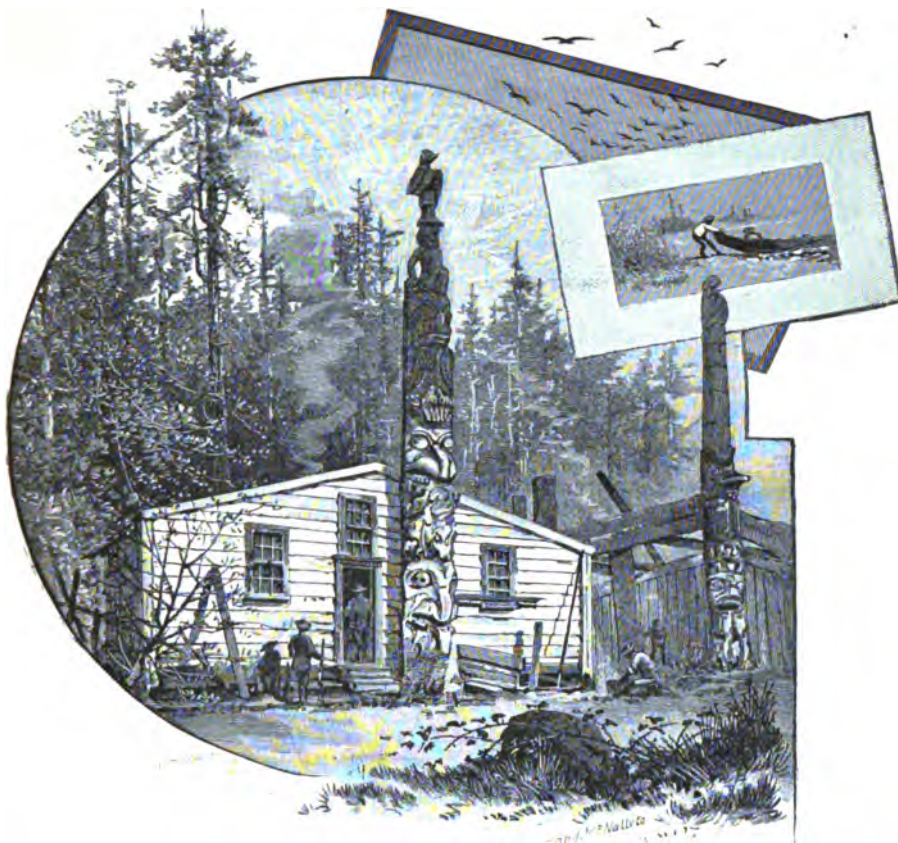
Along this sound and the rivers which empty in it are numerous InnuIt settlements and a few Russian trading-posts, — the most important being Michaelovsky or St. Michael's on the sound, a mart for furs; as we pass northward along the shores of the narrowing sea, — sand dunes, rocks, tundra, succeeding each other, — human life grows scarcer, for the InnuIt's subsistence, the whales and walruses, have been almost driven from the northern seas; but on the bold cliffs of Cape Prince of Wales, which narrows Behring Strait to thirty-six miles, — and where the American and Russian landholdings approach within two miles by dividing between them the barren rocks of the Diomed Islands in mid-channel, — is the largest InnuIt village in the north, the settlement of Kingigahmut; and beyond it, in Kotzebue Sound of the Arctic, is the last safe Alaskan harborage. Beyond this the coast trend is for a long distance still north-west, till at Cape Lisburne begins the eastern and northern shore.

Alaska is called a "Territory" of the United States, but it is so only in part, for it has few inhabitants to form the basis of a popular government; its appointed governor and judiciary are its Territorial officials, and Sitka is the nominal head, shorn of its trim glory of the Russian time. For all this country was the domain of Russia, a fur-trading preserve under the monopoly of a great company chartered by the Crown, and loaded with delusive privileges and ruinous obligations; a source of profit under the iron merchant Baránoff, it became a burden and an embarrassment under the unpractical, pompous, martinet rule of naval officials, till in 1867 Russia was glad to sell it to the United States for just about money enough to pay the debts incurred on its account.

The inhabitants of Alaska are and for years will probably be a fringe of fishermen on the coasts, with a few hunters and trappers farther back; and they are sharply divided by geographic lines. The Sitkan archipelago and mainland are occupied by less than 7000 Indians of the Thlinket or Koloshian race, — fish-eaters, with the bowed and ill-developed legs and stooping gait but sinewy chest and arms of the habitual oarsman.

Their great permanent occupation is halibut fishing (those fish not coming precariously at certain seasons, but being reliable all the year); and they all live in small villages at convenient spots on the coast.

These Thlinkets extend to Prince William Sound. Farther along, on the Kenai Peninsula, are the Kenaitzes, a tribe of the Tinné branch of the great Athabasean race, — meat-eaters, and the only hunters in Alaska; the Tinné rove far along the forested ridges of the interior, — the Kuskokvim and Tannanah Mountains and others, — and fight off the less warlike InnuIt from the upper valleys. They, too, live in permanent villages.



AN ALASKA-INDIAN HOUSE, WITH TOTEM POLES.

The great island of Kadiak, the trade centre of Alaska, is inhabited by a variant of the Aleutian race (which occupies the Aliaskan Peninsula and the island chain to the remotest west) called Kaniags, and by a mixed race bred of Russian men and Kaniag women, known as "Creoles;" the latter are hunters and trappers mainly, trading with the stores at St. Paul, the most important fur trading centre of central Alaska, and living in a fashion much like that of the Russ. The Aleutians seem a connecting link between the Japanese and the Innuited, the features being of the Japanese type, the general physique rather of the Eskimo, — small in stature, with flat noses and projecting under-jaws, high cheek-bones, coarse straight hair and scanty beard, and brownish-yellow skin.

The great Innuited race in Alaska — a branch of the Eskimo described at the beginning of *North America* — occupy the eastern coast of Behring Sea, from the head of Bristol Bay in the Nushagak district, and the shores of the Arctic Ocean to and through Greenland: they are fishermen and canoists and dog-drivers. On the Alaskan shores the awful storms over the interior moor, and the hostility of the Tinné, keep them from going far inland, and they are little but fishermen.

Alaska's sources of wealth consist in furs, fish, and minerals. The fur-trade the most important of these as yet, comprises both land and sea furs, the first including the skins of black and brown bears, foxes of different species — among others the

silver or black fox, the most valuable and found in its highest perfection in the Copper River region—the land otter, marten or Alaska sable, mink and muskrat. The sea furs consist of the skins of the sea-otter, and the fur-seal; among the most prolific hunting-grounds of the former are the outlying islets of the Shumagin Islands; the capture of these incredibly shy and keen animals, hunted amid the wildest breakers and most dangerous rocks and furious storms of the North Pacific, is the most perilous of employments. The fur-seal commerce is of much greater importance, constituting, so far as explorations have yet determined, fully a half of the Territory's natural resources. Until quite recently fur-seal skins to the value of one and a half million dollars were exported annually from the little Pribyloff group lying away out in the heart of Behring Sea, 200 miles from the mainland and forming the one commercially valuable part of Alaska. But this important industry is now waning, as a result of the indiscriminate slaughter of the seals at sea. The Pribyloff trade was formerly a Russian monopoly, but in 1870 it was leased by the United States to a corporation for a term of twenty years, the take being limited to 100,000 skins a year; in 1890 the right was granted to another company, with the number also limited, the take for the first year not to exceed 60,000. The government has already realized enough from these leases to cover the sum paid to Russia for the Territory. Since that purchase, fur-seals skins to the amount of \$33,000,000 have been shipped from the Territory for the London markets. The total value of all the other Alaskan products for the same period does not reach \$30,000,000, more than half of which was derived from other furs, notably the sea-otter.

It has been said that no alarm need be felt on account of the threatened extinction of the fur-seal, as, in that event, the salmon, cod, and herring fisheries would immediately assume an importance that would amply compensate for the loss, and which cannot be attained so long as the seal prey upon the fish.

The fisheries of Alaska are at present of great value. The canned salmon industry which does not date back of 1884 amounts to \$7,000,000 already. The Kadiak group forms the centre of this business, and furnishes two-thirds of the entire pack of the country. Here are ten canning establishments—one of them the largest in the world—eight of which are supplied from one small river, the Karluk. In 1890, three million fish, representing a pack of 200,000, were taken from this little stream, which gave employment to 1100 fishermen and packers. The herring fisheries yield large quantities of oil and the codfish catch foots up to \$3,000,000 since 1868. With the one exception of the fur-seal trade there is no falling off in these various productions.

The minerals of Alaska include gold, silver, coal and copper. Copper is known to exist in very rich deposits in the valley of the Copper River, but it is so situated as to make it almost impossible to overcome the obstacles to transportation. Coal has been located at different points. The deposit on the isthmus between Portage Bay and Herendeen Bay bids fair to become of great value. But little silver is exported. The first productive gold mines were located in 1880. The most famous of the gold-producing quartz mines is the Treadwell or Paris mine on Douglas Island; its output, though large, has been greatly exaggerated. The surface mines of the Yukon, now decided to lie without the limits of the Territory, yielded \$90,000 in 1890.

Vast forests, mainly of Sitka spruce, cover the coast districts and much of the interior below 1000 feet. The exportation of lumber is, however, prohibited by law, and the timber of Alaska cannot properly be reckoned among the resources.

MEXICO.

Latin America. — With Mexico we enter Latin America, thus named, not because the so-called Latin race predominates,¹ — the prevailing blood is Indian, — but because the Spanish and Portuguese tongues, both descendants of the Latin, form the official languages and at the same time the speech of the Whites and of multitudes of Christian and peaceable Indians. The extensive and beautiful countries of Latin America emancipated themselves about sixty years ago, after having been held for three centuries in slavery by the Spaniards and Portuguese. Lusitanian America, or Brazil, separated itself painlessly from the parent land, but Castilian America was torn with violence from Spain.² In spite of Bolivar's enthusiasm, in spite of the courage of his lieutenants, in spite of the tenacity of resistance which constitutes the chief feature of the Indian character, the struggle would have surely ended in the defeat of the insurgents, had it not been for the vastness of the country, destitute of bridges and roads, which Castile and Leon had to hold. The decisive victory immor-

¹ Until quite recently it has been impossible to obtain anything like reliable statistics of population, or of the state of the finances and trade in most of the countries embraced in what M. Reclus terms Latin America. M. Lamas of the Paris *Revue Sud Américaine* has lately published a carefully prepared work on the financial and economic status of Central and South America, based on calculations made in 1883-84. From this and other sources, including Drs. Wagner and Supan's latest compilations, material has been gathered for the subjoined table of population, which gives approximately the proportions of Whites, Indians, and half-breeds. — Ed.

POPULATION OF LATIN AMERICAN STATES.

COUNTRIES.	CAUCASIAN.	INDIAN.	MIXED, ETC.
Mexico (1890)	2,165,000	4,330,000	4,900,000
Central America	364,000	1,163,000	1,583,000
Colombia *	384,000	1,245,000	1,692,000
Venezuela (1888)	313,000	854,000	1,072,000
Ecuador (1885)	100,000	800,000 ⁴	300,000
Peru (1876)	475,000	1,849,000 ⁴	656,000
Bolivia	297,500	840,000	297,500
Chili (1889)	2,670,000	50,000	445,000
Argentine Republic (1887) . . .	3,200,000	100,000	200,000
Uruguay ⁵ (1888)	712,000		
Paraguay (1887)	41,000	69,000	220,000
Brazil (1887)	3,900,000	3,900,000 ⁶	5,200,000
Totals	14,621,500	15,200,000	16,565,500

² See page 737.

³ An official estimate of 1881 gives the population of Colombia as 4 million. For M. Reclus's estimates see page 741.

⁴ Including the wild Indians.

⁵ See notes pages 785, 786.

⁶ See page 800.

talized the field of Ayacucho, on the Peruvian plateau ; the engagement took place on the 9th of December, 1824, and the war had already lasted fourteen years.

Since those days of glory, that dawn of liberty, peace, and happiness, most of the South American republics have consumed forty or fifty years of their youth in civil wars. In imitation of the United States, these republics are composed of provinces having the rights and privileges of sovereign states ; they are restless, imperfectly cemented together, and agitated by race antipathies. The Whites despise the half-castes and the Indians, the Indians have a jealous hatred of the half-castes and of the



RUINS OF A TOLTEC PALACE.

Whites, the half-castes envy the Whites and scorn the Indians. Hence pronunciamientos and uprisings without end. A general or a politician hoists a standard on which is written the imposing words : " Liberty, Truth, Justice," — and blood reddens the pueblos and the campos. On account of these dissensions, the European fleeing from the Old World rarely steers toward these favored shores, even toward the *tierras templadas*, that is, those lands of Latin America which are made temperate by their altitude : these are marvellous regions, and fortune is to be found in them as well as in the United States and in the English domains. Costa Rica, Chili, and the Argentine Republic, where the white race has the preponderance, are comparatively tranquil, and yet few men brave the sea to begin life anew among the Chilians and Costa Ricans ; the southern Europeans, however, land in great numbers on the banks of the Plata.

Brazil is a country apart. It is a land where Portuguese is spoken, and where the people are a mixture of Whites, Blacks, and Indians. Portuguese America and Spanish America resemble each other in one respect: the inhabitants of their hot districts and their temperate districts have little love for labor. In the *tierras calientes* the climate overpowers them, in the *tierras templadas* it renders them effeminate. The sobriquet of Santa Siesta, which has been given to certain cities of Latin America, might with equal appropriateness be bestowed upon all of them. The South Americans spurn manual toil, mental effort, the energy to undertake, the force to persevere, the joy of achieving, — in short, everything that brings pain or requires persistence. It is the foreigner here who conceives and executes all projects of advancement.

The Old Mexicans: their Barbaric Rites, the Splendor of their Empire.— Mexico embraced fully twice its present area before the loss of Texas and the cession of California and New Mexico to the United States. The Mexico of to-day comprises the plateaus colonized by the Nahua nations and wrested by the Conquistadores from the Indian emperors, — 751,585 square miles,¹ with about 11½ million inhabitants. This vast country, then, contains only about 15 souls to the square mile, in spite of the almost universal healthfulness of the climate, and notwithstanding the fact that centuries have elapsed since the Mexicans became a civilized people.

It is now more than three hundred and sixty years since the Estremaduran Cortes, with his six or seven hundred followers, overthrew the Aztec empire. It was the Israelitish band against the forces of the king of Damascus. They seemed "like two little flocks of kids," and "the Syrians filled the country," but the Spaniards had faith in the words written 'neath the cross on their banner: *In hoc signo vinces*. Cortes established the power of Spain over all this immense region, and Mexico became, with the lands stretching southward to the Strait of Magellan, the mighty Empire of the West Indies. It is probable that the witnesses of this grand undertaking, whether priests or warriors, greatly exaggerated the power of Montezuma's empire, the wealth of its cities, the magnificence of its arts, and the number of its inhabitants. Cortes did not subdue a race conscious of its oneness, feeling in all its tribes the injustice committed against one. Such a nation could never have been curbed, it would have straightened under the oppressor and dealt him back the blow. The truth is that the country was broken up, according to the mountains, plateaus, and valleys, into a multitude of small peoples, speaking divers languages, and under forced subjection to a federation consisting of the warrior bandits of the three cities of Tenochtitlan (afterward Mexico), Tezcuco, and Tlacopan. Certain of these peoples possessed the beginnings of the civilized state, others retained the old forms of savagery. The Aztecs were not the aborigines of Mexico; they had replaced, three or four hundred years before the advent of the Spaniards, tribes coming like themselves from some region of the north, and belonging like themselves also to the Nahua family. The Toltecs, about the seventh century, had opened the period of Nahua invasions; later came the Chichimecs, and then the Aztecs.² But nothing of all this is authenticated.

¹ These figures are from Supan and Wagner's latest tables. The area of the country occupied by the Aztecs alone Prescott places at probably less than 16,000 square leagues, though he says that precise boundaries cannot be assigned to their empire. Humboldt estimates the Aztec territory at 160,000 to 180,000 square miles. — Ed.

² Mr. John Foster Kirk, in his edition of Prescott's *Conquest of Mexico*, appends the following note to the author's statement that the early Mexicans came from the remote regions of the north: "Some recent writers have contended that Mexico must have been peopled originally by migrations from the

Many ethnologists, explorers, and antiquarians trace the Toltecs to Asia, and they find numerous proofs of their relationship to the Chinese, Japanese, and Malays. If the Toltecs came from China, Japan, or Malaisia, they may have been brought hither by the Kuro Shiwo, which flows in a curve from the Sea of Japan to the American coast. The Indians of the Mexican plateaus in fact bear a considerable resemblance to the Yellow Asiatics.

Two hundred years before the time of Cortes, Tenochtitlan, the city of great temples, the impregnable fortress, the seat of empire and cruelty, was built on islands in the lagoon-lake of Mexico.¹ Blood-thirsty priests, the chronicles tell us, officiated there in two thousand idolatrous temples erected to divers destroying powers. Fully 70,000 persons sometimes perished yearly by the sacrificial knife, and the Spanish conquerors found on taking Mexico the skulls of 136,000 victims in one of the edifices in which it was customary to preserve these grinning horrors. On special merry-making occasions, the priests cut out the hearts of hundreds of the unhappy beings reserved for sacrifice, and offered them up to their divinities, to the great joy of the people. The bodies of all who perished on the altars were afterward served up as banquets, to which both sexes were invited, and which were prepared with much care and art. At their venerated table, in company with the great of the empire, the priests of the rain-god, Tlaloc, feasted on babes whom they had sacrificed to their deity, in accordance with ceremonies prescribed in their ritual; this was consecrated food for these priests and lords. Xiuhteculli, the god of fire, willed that his victims should suffer a thousand deaths before yielding up the last breath; they were thrown upon live coals, in a large caldron, then, when almost roasted and about to die, the priests dragged them from the furnace and, opening their breasts, tore out their hearts and cast them at the feet of the god of flames.¹

But, — still following legendary accounts, which, doubtless, give a too gloomy view of the crimes and a too glowing picture of the virtues, — in spite of the cruel hierarchy of this despotism, in spite of bloody laws and human sacrifices, Anahuac, or the Tenochtitlan plateau, was well governed. It had hospitals for soldiers, and a sort of postal service performed by slave couriers. Beside the sacrificial *tumuli*, these

south. Aztec names and communities, and traces of Toltec settlements long anterior to the occupation of Anahuac by the same people, are found in several parts of Central America. The most primitive traditions, as well as the remains of the earliest civilization, belong also to the same quarter. This latter fact, however, is considered by Orozco y Berra as itself an evidence of the migrations having been from the north, the first comers having been naturally attracted southward by a warmer climate and more fertile soil, or pushed onward in this direction by successive invasions from behind. Contradictory inferences have in like manner been drawn from the existence of Aztec remains and settlements in New Mexico and Arizona. All that can be said with confidence is that neither of the opposing theories rests on a secure and sufficient basis."

As for the Chichimecs, whom M. Reclus classes here in the Nahua family, it may be said that their name, derived from *chichi*, "dog," is applied to a great many savage tribes, and that it is by no means certain that the Chichimecs here in question belonged to the same group of nations with the Toltecs. For evidence and arguments to the contrary, see *Lenguas Indigenas de Mexico*, by Sr. Francisco Pimentel, and *The North Americans of Antiquity*, by John T. Short. — Ed.

¹ The foundations of the city of Mexico were probably laid in 1325 or 1327. It is said that the Aztecs, after a most remarkable series of wanderings and adventures on the Mexican plateau, at length reached the south-western shore of Lake Tezcuco. Here they beheld a nopal springing from a crevice in a rock, and on the cactus was perched a royal eagle of wonderful beauty, holding in his talons a snake. Interpreting the omen to indicate this spot as the site of their future city, the Aztecs immediately began to sink piles in the marshes, on which they reared their light reed dwellings. The city was first called Tenochtitlan (nopal on a stone) in commemoration of its miraculous origin, but the name was afterward changed to Mexico in honor of the war-god Mexitli. — Ed.



A YOUNG TOLTEC WOMAN.

Indians had erected obelisks, temples, and palaces. They had a considerable acquaintance with astronomy; they wrote, or rather traced, hieroglyphics on a sort of paper; they laid out maps; they had painters, sculptors, smiths, and artists in metals; they tilled and irrigated the soil, and it is said that their cities, which were already paved and lighted when Paris was still a mire-pit by day and a robber's den by night, bore a faint resemblance to glorious Athens.

In Tenochtitlan, in Tezcuco, in Tlascala, famous for its warriors, in Cholula, the city of temples, the people were fond of the arts, of luxury, jewels, gold and silver ornaments, and elegant fabrics; they had schools, and they spoke a pure language. Perhaps the fort of the lake, the refuge of bandits, the Mexican Rome, in a word Tenochtitlan, was about to break forever her bloody knife on the sacrificial stone when suddenly the messenger of Fate, the man of Medellin,¹ appeared.

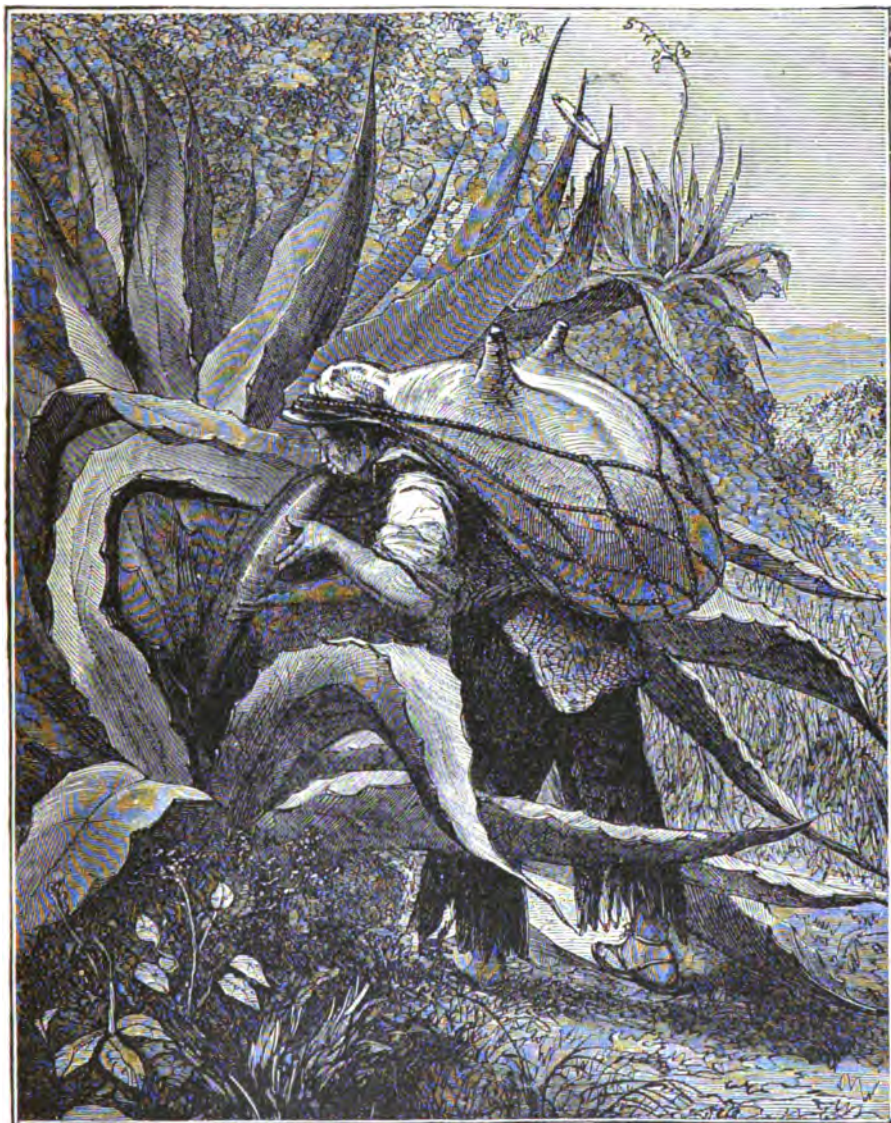
Is it to the terror inspired by their sanguinary altars, is it to the vast distance which, in the presence of white superiority, was put all at once between what the Aztecs believed themselves to be and what they saw themselves become under the proud tyranny of the Peninsular Christians, or is it rather to race disposition that we must attribute the sullen demeanor of the Indians of Mexico? Save among other peoples of the same Indian stock, we know of no nation more stubbornly reticent, more restive under peaceable conditions, or more indifferent outwardly to the delights of life, than the eighty or ninety tribes which form, with the Europeans and half-castes, what we are pleased to term the Mexican people. Even when intoxicated with pulque, — their brandy, extracted from the juice of the maguey, — these men are never in joyous mood. The pulque irritates them or overpowers them; it undermines and ruins their constitutions, and it is drying up the fountains of their race; though it sometimes makes them dream, it never brings a smile to their lips.

Hot Lands. — Temperate Lands. — Cold Lands. — If we set out from the Gulf of Mexico on the east, or from the Pacific Ocean on the west, or from the lowlands of the Isthmus of Tehuantepec on the south, for Mexico, Puebla, Guadalajara, Guajuato, or any other great Mexican city, we find before us high mountains to be climbed, — for Mexico is a succession of plateaus, with altitudes varying from 5000 or 6000 feet upward. These plateaus become more and more contracted as they approach the Isthmus of Tehuantepec. Tehuantepec has a breadth of more than 125 miles from sea to sea, and an elevation of only 633 feet at the *mesa* of Tarifa; this depression is a break in the mountains which form the back-bone of the two Americas. It marks sharply the separation of Mexico from Central America.

Along the Pacific, with its nearly rainless skies, along the Gulf of Mexico, with its super-humid climate, the coasts, closely pressed upon by the mountains, are burnt-unhealthful, and often deadly. Acapulco, a port on the Pacific, passes for one of the hottest places on the globe, and its inhabitants relate that one of their number after death took his way to the infernal regions, but at nightfall ascended again to the surface; accustomed to the temperature of Acapulco, the hidalgo found it intolerably cold in Beelzebub's realms. On the opposite seaboard, the shores of Vera Cruz (where the yearly rainfall exceeds 155 inches) are dangerous in summer for the Mexican of the low countries himself, and almost infallibly fatal to the European who goes there to crave a smile from Fortune. This entire coast zone is called in Spanish the *tierras calientes*, or Hot Lands. It has an annual mean of 77° F. It is man that vegetates here and the plant that lives: The vegetation is strong, luxuriant, and

¹ Cortes was from Medellin, a town on the Guadiana, in Estremadura.

graceful. Thickets of aromatic shrubs abound, with twining vines, ropes of living green, and trees of that magnificent growth which is found nowhere outside of the tropics. The *tierras templadas*, or Temperate Lands, succeed the *tierras calientes*,



AN INDIAN EXTRACTING PULQUE.

along the flanks of the mountains and on the plateaus; they rise in terraces between 3000 and 7000 feet. The Hot Lands are sometimes burned by a dry, oven-like heat, sometimes steamed as in a vapor-bath by tempestuous rains falling from an electric sky, but the Temperate Lands, with an annual mean of 68° F., rejoice in an almost eternal spring. Above 7000 feet, the *tierras frias*, Cold or rather Cool Lands, are

found. A great part of Mexico belongs to this zone. Above 8000 feet, altitude triumphs over latitude, and the fir-tree of the north appears in all its varieties.

Sierras. — Volcanoes of Anahuac. — The plateau of Anahuac, where the rainfall is only a sixth as great as in the lowlands, consists of plains more than 5000 feet in elevation, and out of the reach of yellow fever, which rarely climbs to this height. Mountains fabulously rich in metals, especially in silver, spring from these plains. In the north, in the states of Sonora, Chihuahua, Coahuila, Durango, Zacatecas, Nuevo Leon, and particularly in Bolson de Mapimi (a rocky district over which the Apaches rove), the sun drinks the saline lakes down to the very salt. Not a tree quivers in the wastes encircling these desolate sheets. In the presence of such barrenness the Estremadurans and Castilians of the Conquest might easily have fancied themselves in their own fulvid land. That part of the drainage which is not emptied into the lagoons rolls toward the gulf on the east, or the ocean on the west, in very swift torrents, at the bottom of gorges or through cañons. Plantations are rare in all this region; rare also are the haciendas, which serve as farm-houses in times of peace and fortresses in times of revolt.

The loftiest mountains of México do not rise in the sierras which support or ridge the plateaus, and which are continued on the north into the United States; they tower in isolated peaks between Mexico and the depression of Tehuantepec. Popocatepetl, visible from the capital, has an altitude of 17,782 feet.¹ It is a volcano. In the very jaws of the monster, and deeper still, in his dusky throat, men are to be seen suspended by cords wound over a windlass; far from securely held by the twisted tow or bundles of fibre, they float over the chasm in the crater chimney and collect the sulphur from the fissures in the rock. The silvery top of Citlaltepétl, or Star Mountain, otherwise called the Volcano of Orizaba, is 17,664 feet above the sea: it is even possible — for these measurements do not seem to be accurate — that it is as lofty as Popocatepetl. The names of these two Mexican giants seem to us rude and barbarous, but the agglutinative dialects of Anahuac are fertile in formidable words, some of them having as many as eighteen syllables.

Then follow: Iztaccihuatl, or the White Woman (17,011 feet), a short distance north of the colossal Popocatepetl; Nevado de Toluca (14,994 feet), Cofre de Perote (13,419 feet), and the volcano of Colima (12,684 feet). These peaks and others, all rising south of the 20th parallel, are volcanoes, either extinct, quiescent, or active. The loftiest owe their majestic mien to the isolation of their pyramids, their forests, and their almost eternal snows; not one of them sends down a great stream to the sea. So dry are the plateaus that many a rio is arrested in its course before reaching the chasms through which the waters of the plateau are precipitated into the lowlands. Owing to the lack of rain, Anahuac is studded with deserts. He who seeks tropical opulence there will never find it; on the contrary, upper Mexico is stately and bare, a region of rigid lines and cloudless skies. Now, this high Mexico is the true Mexico, a stern land for the settler; but the settler is likewise stern, for he is of Indian stock, crossed here and there with the Peninsulars.

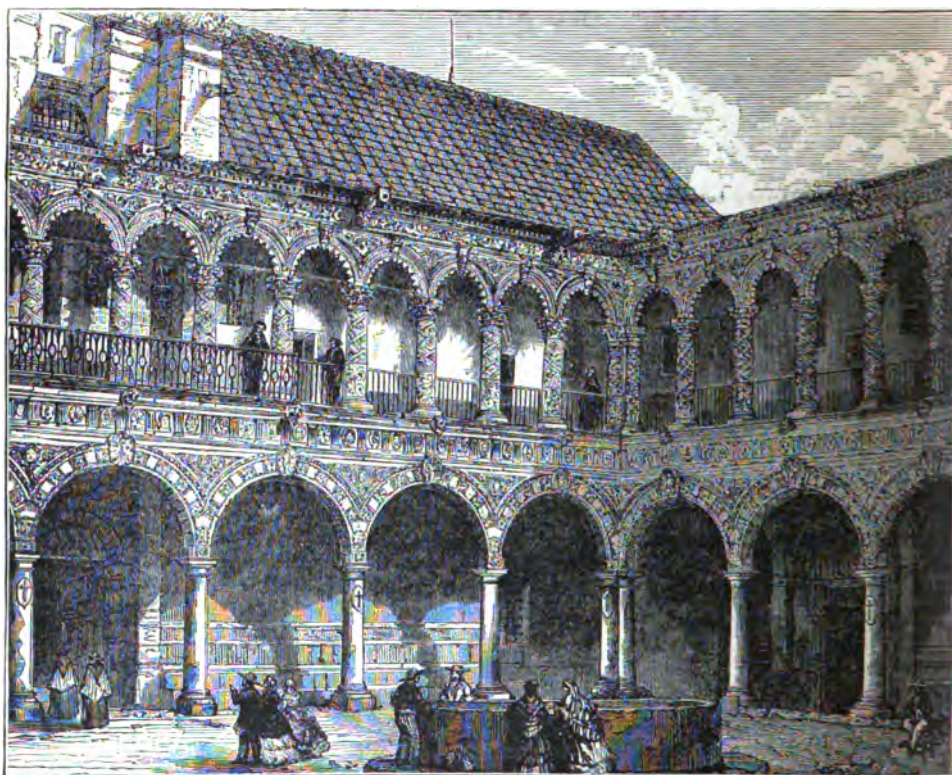
Indians. — Whites. — Half-Castes. — Of the 11½ million Mexicans, 4,330,000 are pure

¹ In the *Cuadro Geográfico de los Estados Unidos Mexicanos* by Antonio García Cubas, published in 1884 by order of the Mexican Government, the following are given as the measurements of the principal mountain-peaks: Popocatepetl, 17,799 feet; Citlaltepétl, 17,372; Iztaccihuatl, 16,076; Nevado de Toluca, 15,020; Nevado de Colima, 14,364; Ajusco, 13,626; Matlalcueyatl or Malintzi, 13,475; Cofre de Perote, 13,416; and Volcan de Colima, 12,743. — Ed.



POPOCATEPETL.

Indians, of varying degrees of enlightenment, from those who furnish the Presidents of the Republic its writers, leaders, and physicians, to the tribe in which a patient who is to be bled is fastened to a stake and riddled with fine arrows by a "doctor," until the vein that is to be opened is reached. These tribes speak 51 different idioms, principally dialects of the Aztec, which was the predominant speech of the land on the arrival of the Conquistadores. About 2 million are classed as Caucasians; about 5 million are of mixed race, a fusion of Indians and Whites on the plateaus, and of Whites, Indians, and Blacks in the *tierras calientes*, especially in the district of Vera Cruz. These mixed peoples all speak Spanish, either exclusively or along with the



COURT OF THE CONVENT OF LA MERCED, MEXICO.

tongue of the Indian tribe to which each is related. Castilian is rapidly making its way among the pure Indians themselves. Since the *gente sin razon*,¹ as they call themselves in their modesty, has been brought nearer to the capital by railways and roads, since its men have become proprietors instead of usufructuaries, the Indians of Mexico have interested themselves in the general life of the nation; their feeble and barbarous agglutinative dialects are no longer sufficient for their wants. Formerly they contented themselves with drinking pulque, directing the water-courses over the arid soil, and warming themselves under the *capa del pobre*, the poor man's cloak, as the Spaniards of America artlessly name the generous sun. In passing from the

¹ Unreasoning race.



MEXICAN WATER-CARRIER.

Indian tongue and Indian thought to the Spanish tongue and Spanish thought, the Indians must eventually forget their hatred of the proud stranger, who has so trodden them under foot that they have even regretted the yoke of their Nahua oppressors, and Huitzilopochtli's thirst for blood.

The 2 million Caucasians are by no means all pure Whites; the number would shrink greatly if we should subtract from it all those who are not really of European blood,—of *sangre azul*.¹ Of the more or less pure white Mexicans, some are descended from the Castilians, Andalusians, Catalans, Galicians, and Basques, who have arrived during the last three centuries; the rest are Chapetones, or Gachupines (Spaniards by birth), and other Europeans. Among the latter we encounter many Gascons and multitudes of Italians. The Italians will soon be the predominant element here, as well as in nearly all the rest of Latin America. As for the Negroes, they numbered only a few thousand before the Cuban War, which drove them in throngs to the shores of Vera Cruz.

Without counting the wholly recalcitrant Indians of the dry campos,—those hardened nomads and most skilful horsemen, mortal enemies of the townspeople and of the white proprietors, as well as of the brick-colored farm laborers,—Mexico comprises, then, three peoples, distinct in their history and their character, namely, the Indians, the Whites, and the half-castes; these are becoming little by little, through the use of the Spanish language, a more united nation than they ever were before, and a more genuinely Mexican nation; this very obstinate and patient people is bigotedly Roman Catholic.

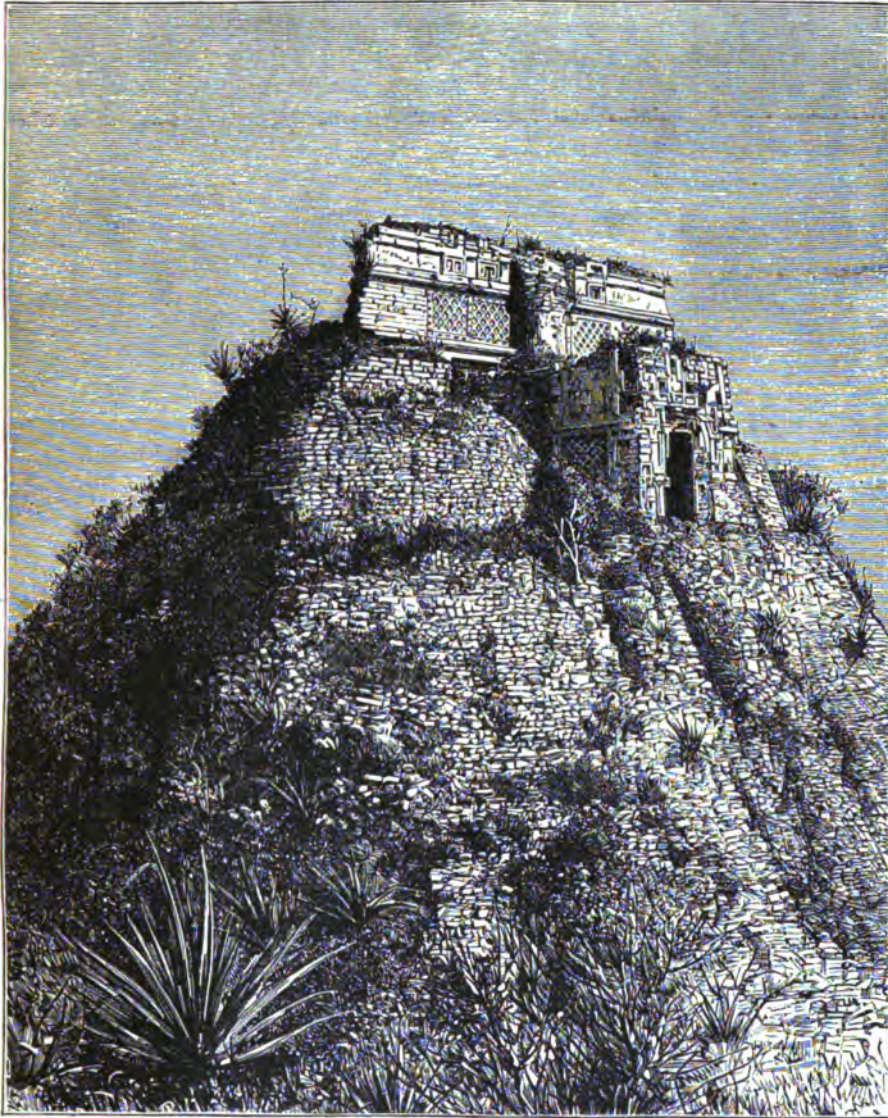
States. — Cities. — Mexico constitutes a confederation of states modelled on that of the United States. These states enjoy full autonomy in local matters, but all affairs of general interest are administered by the central government. The Republic includes at present one Federal District, Mexico, — with 476,000 inhabitants, — and 27 States, besides the Territory of Tepic and the Territory of Lower California; the last is a peninsula, almost separated from the mainland, stretching southward between the Pacific Ocean, on the west, and the Gulf of California, on the east. This strip of land, 700 miles long, consists of gray or tawny mountains, which are excessively dry, but rich in metals; it contains a population of only 30,000 on 54,000 square miles.² The 27 States bear either Indian names, such as Tlascala, Zacatecas, Michoacan, and Chihuahua, or Spanish names, like Vera Cruz, Puebla, Nueva Leon, Aguas Calientes, and Hidalgo; — this last name perpetuates the memory of the “patriot priest,” Don Miguel Hidalgo, who led the revolt of 1810 against Spanish rule, or, rather, against the intolerable oppression of the Gachupines, and who was executed in 1811. The largest of the States are Chihuahua, comprising nearly 90,000

¹ *Sangre azul* is a Spanish term signifying literally “blue blood”; the white race is called in Castilian *raza de sangre azul*.

² The results of late explorations in Lower California prove that the popular notion that this country consists wholly of arid, sterile mountains is without foundation in fact. Until quite recently the entire region has been practically unknown territory. But it is found that, in the north, especially, the peninsula compares favorably with the State of California in fertility of soil, agreeableness of climate, and beauty of scenery. The mountain-range, which has an extensive pine-belt, descends to the coast by *mesas*, on which the fruits of the New England States grow well. The valleys are fertile and capable of producing luxuriant growths of grapes, figs, bananas, oranges, and other fruits. Grass is everywhere abundant. The climate is extraordinarily healthful. The streams are adequate for irrigating purposes, and water can be obtained everywhere by sinking wells. Besides the 30,000 inhabitants of the south, almost all of whom are of Spanish descent, there are rapidly growing towns in the north, the settlers of which are very largely of English speech. — ED.

square miles, Sonora, about 79,000, and Coahuila, nearly 62,000; the most populous are Jalisco, 1,250,000 inhabitants, Guanajuato, 1,007,000, and Puebla, 833,000.

Mexico (pop. 329,000), or Mejico, is situated at an altitude of 7800 feet, in the Cold Lands. It stands on a plateau of the interior, between the salt lake of Tezcuco



MAYA RUINS, UXMAL.

and the fresh lake of Xochimilco, about midway between the Gulf of Mexico, where its port is Vera Cruz (pop. 24,000), and the Pacific, where Acapulco is its seaport. Mexico passes for the most charming city of Spanish America, and it was the most populous before the flowering-out of Buenos Ayres, which has become the chief Cas-

tilian-speaking city after Madrid. But the scenery around the Argentine metropolis is commonplace, while Mexico contemplates the majestic peaks of Popocatepetl, Iztaccihuatl, and others of like mien. — Guadalajara (pop. 95,000) is 5085 feet above the sea; Puebla (pop. 79,000) lies at an altitude of 7119 feet, and Guanajuato (pop. 52,000) at 6709 feet.

Yucatan. — The Mayas. — The states of Chiapas and Tabasco, and the peninsula of Yucatan, lying east of the Isthmus of Tehuantepec, belong politically to Mexico, but physically they form a part of Central America. The area of the entire tract is fully 85,000 square miles; the population is less than 700,000. The only large rivers of the section, — the Grijalva, which traverses Chiapas, and the Usumacinto, which becomes the Tabasco, both descend from the Guatemalan plateau. Although Yucatan has the Gulf of Mexico on the west and north and the Caribbean Sea on the east, it contains no important stream; there is hardly a brook on its limestone soil. Only a very small portion of the Yucatan waters flows on the surface of the country, which is as low and monotonous as Anahuac is high and varied; the rest fills up subterranean lakes, on which glimmer, here and there, dim rays of light let in through the fissures of the *cenotes*, or natural wells. These hidden reservoirs are emptied into the Gulf of Mexico through streams which gush forth as springs from the very sea-bottom.

In this eastern Mexico, — which is not Mexico at all, — at Izamal, Chichen-Itza, Tekax, Tihoo, Mayapan, Uxmal, Mani, Ococingo, Uxalan, and Palenque enormous ruins with huge sculptures recall one of the great nations of this part of America, the Mayas, who were driven from Anahuac in ancient times by the Nahua families. This old Maya race bears witness of itself in other and living monuments. It has held out obstinately until the present day, and the language has survived with the people. The Maya tongue predominates now in Yucatan to such an extent that the proprietors of haciendas, and even the townspeople of Spanish origin, are under the necessity of speaking it, since the masses are either ignorant of Castilian or scorn to understand it. On the eastern coast of the peninsula there are still a few tribes of *Indios bravos*, or uncivilized, wild Indians. The people of Yucatan live in sleepy pueblos and in three lifeless cities: Merida (pop. 32,000), whose name recalls an Estremaduran town having a famous bridge; Valladolid, another celebrated name adopted from old Spain; and Campeche (pop. 15,000), widely renowned for its dye-woods.

CENTRAL AMERICA.

Volcanoes. — Revolutions. — Whites, Indians, Ladinos. — Central America resembles Mexico in the distribution of its surface, which embraces a cold region, a temperate region, and a hot region, and in its elevated plains, which stretch between the same two oceans; its plateaus are likewise ridged with volcanoes, and strewn with ruins bearing record of ancient Indian peoples. Central America has much greater natural advantages than Mexico. It rears its plateaus between two narrow strips of land, Tehuantepec and Panama, either of which might be named the Suez of the New World if the luxuriant vegetation watered by tropical rains were replaced by arid

sands; in one part of its own territory a natural water-way brings the two oceans within twenty-six miles of each other; and a ship-canal will soon make Central America one of the most frequented highways of the world. Again, as Central America is narrower than Anahuac, the capitals of its states are nearer both seas than the



TYPES OF LADINOS.

great Mexican cities are, and they are on lower, more fertile plateaus, where the climate comes nearer to the ideal of perpetual spring; but the rainy season here lasts in some places eight months, in others six. At such times the unprecedented wetness makes one long for dry, severe, cold weather, and the traveller, denouncing his lot, in vain uses his spurs to extricate his horse from the sticky mire and clay. But for this

sour, damp, musty half-year, but for the volcanoes and earthquakes, but for foreign cupidity, which has already thrown battalions of filibusters into it, this isthmian land would be the gem of the New World. Besides, the country has always been prolific in revolutions. Under the cloak of frivolous party names, empty agitations are going on unceasingly, — the fruit of the overweening conceit of blatant boasters, of the low ambitions of leaders who never received a wound (unless when engaged in acts of open brigandage), and of greed for gain, honors, and bawbles; "Thank God, we have had only two earthquakes and three revolutions this year!" a President of San Salvador is said to have exclaimed on a certain occasion. As for volcanoes, Central America possesses 85, 40 of which growl and bark and eject fire and ashes. Some of them are terrible. In the sixteenth century, after the Conquest, the Church sought to redeem these monsters "possessed with the devil" by the sacrament of baptism; but the holy water poured into their craters by the priests extinguished none of the fires.

Central America stretches from the Isthmus of Tehuantepec to the Isthmus of Panama, from the terminus of the North American sierras, where the land sinks to 650 feet above sea-level, to the starting-point of the Cordilleras of South America; in Panama the surface has an elevation of only 300 feet. Politically, the country does not reach its natural limits. On the north, Mexico has taken the divisions of Chiapas, Tabasco, Campeche, and Yucatan; on the south, a large fragment of the Costa Rican plateau is included in the United States of Colombia, and the British colony of Balize extends along the shores of the Caribbean Sea. Thus reduced, Central America comprises about 172,000 square miles, with a population of 3,110,000,¹ or about 18 inhabitants to the square mile. San Salvador contains 92 persons to each square mile; in Guatemala the ratio is 31, in Costa Rica 11, in Honduras 9, and in Nicaragua between 6 and 7.

The Whites predominate nowhere except in Costa Rica; everywhere else the people are largely Indians or Ladinos. Ladinos, that is to say Latins! Now, what Latin elements do these Central Americans possess? Almost none, since they are much more closely allied by blood to the various conquered Indian nations than to the conquering Spaniards who overran the country after 1524, and since, moreover, the Spaniards themselves are Celts, Iberians, Berbers, or Arabs, anything rather than Latins. But the Ladinos speak the rich Neo-Latin tongue whose accents their ancestors first heard in words of command from the lips of the Conquistadores. Little by little, Spanish is becoming the speech of the peaceable Indians who toil in the cacao, coffee, indigo, and cochineal fields, and patiently cultivate maize on soil that produces as many as four crops yearly; it is also making its way among the *Indios bravos*, and it is daily restricting the domain of the Indian dialects, — whether Quiché, Maya, or Nahuatl.

Central America effected its independence from Spain in 1821. A federal government was established, which was overthrown in 1839, after years of civil warfare. The country now comprises five independent States, of unequal size, the smallest of which, San Salvador, is a seventh the size of the largest, Nicaragua. Beginning at the north-west, these States are Guatemala, San Salvador, Honduras, Nicaragua, and Costa Rica.

Guatemala. — **The Guatemalans.** — Notwithstanding its melodiousness, the term Guatemala is not of Spanish derivation; it was not bestowed on the land by the Con-

¹ See page 697.

quistador Don Pedro de Alvarado. Could it have come from the Indian word Uhat-ezmalha, "Mountain ejecting water"? One of the Guatemalan volcanoes, the Volcan de Agua, has in fact more than once suddenly belched forth a frightful torrent from its crater, and hence its name, which signifies "water-volcano."

Guatemala covers 46,774 square miles, and contains 1,460,900 inhabitants (1889). It confronts Mexico on the west, Yucatan on the north, and San Salvador and Honduras on the east. It embraces the loftiest and most extensive plateau of Central America. Though it is only 1600 feet above the sea near the frontiers of San Salva-



THE VOLCAN DE AGUA.

dor, farther north the altitude varies between 4000 and 6400 feet; the Altos of Quetsaltenango, where snow sometimes falls, are even 8000 feet in elevation, the climate is almost severe, the soil is sterile, the surface is rugged, and people emigrate from there as they do from all high, stern regions. Some of the volcanoes follow the Pacific at only a short distance from the coast. The vegetation which springs up along this seaboard during the rainy season withers in the season of drought; but on the Caribbean Sea hardly a month passes without showers, so that the eastern slope of Guatemala is never destitute of vegetation. On the contrary, there is a too great exuberance of plant-life, and man is here cribbed and confined in a species of wooded swamp; on the colder and drier altos, however, the Ladinos have already felled too many trees, and we shall soon ascend here from a virgin forest to a naked Castile.



Three of the Guatemalan volcanoes are above 12,000 feet in elevation : the Volcan de Fuego (of Fire), its neighbor the Volcan de Agua (of Water), and Acatenango, none of which has been accurately measured. The altitude of the loftiest of the three, the formidable peak of Fuego, has been variously estimated at 12,270, 13,120, and 13,950 feet. There are 21 volcanoes in Guatemala, several of which are active.¹

The western, central, and northern parts of the country slope toward the Grijalva, a large river of Chiapas, and toward the winding Usumacinta, into which numberless rios empty, and which descends from the plateau in rapids until it reaches the cataract of Tenocique ; from here its course is more quiet, and it flows through Yucatan into the Bay of Campeche. On the north of this basin, but within Guatemalan territory, sleeps the Lake of Peten, or Laguna de Flores, at an elevation of nearly 4900 feet, and with no visible outlet.

There are few Whites in Guatemala, where the fusion of races has made less progress than in any other of the Central American States ; their number is reckoned at 400,000, but how many have scarce a drop of *sangre azul* in the torrent of Indian blood ! All these so-called Whites speak Spanish, which is imperceptibly bringing under its sway the 26 Quiché, Maya, and Nahuatl dialects still existing in the country ; already a great many half-castes have adopted it in place of their agglutinative tongues, and even a large number of Indians have done the same. Among these last are many of the pagan *Indios bravos*, notably the Lacandones ; but the majority of the Guatemalans profess the Christian religion, which in olden times brought "not peace but war" to the tribes that had sculptured the monuments of Copan, Tikal, and Dolores. On the altos and in the temperate and hot lands, the pseudo-Whites, half-castes, and Indians are increasing rapidly without the aid of any foreign immigration, save from time to time an Italian, Spaniard, or Frenchman, or an occasional new-comer from the United States. The population doubles every thirty years.

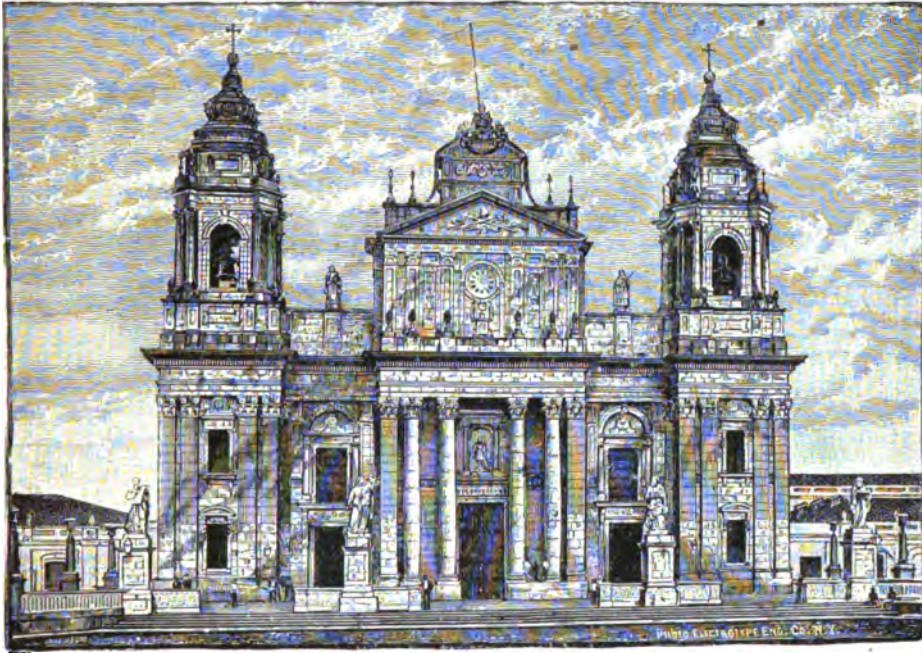
The capital, Guatemala la Nueva (pop. 66,000), is situated 5016 feet above the sea, at 12 or 15 miles from the Pacific, near two frowning summits, the Volcan de Agua and the Volcan de Fuego. The building of the city was begun two years after the earthquake of 1773, which destroyed the old metropolis, Guatemala la Vieja ; the latter town had succeeded as capital Guatemala la Antigua, the residence of the Indian kings, which was suddenly carried away in 1541 by the famous eruption of water from the jaws of the Volcan de Agua.

San Salvador and its People. — San Salvador, the sole one of the five states which does not extend from the Pacific to the Atlantic, covers only 7228 square miles, but it supports over 663,000 inhabitants. On the west it borders Guatemala, on the north and east it is bounded by Honduras. This land, which its Indians name Cuscatlan, "land of riches," consists of a narrow strip of coast along the Pacific, embracing forest-covered slopes and one high plain. This table-land, which forms a part of the plateau of Honduras, is 30 miles broad and has a mean elevation of about 2000 feet ; it supports volcanoes which continue the Guatemala range. Not including the mud-volcanoes, there are here thirty mountains of fire, either extinct or active, between 3600 and 7900 feet high ; the loftiest are San Vicente (7870 feet [?]) and San Miguel

¹ Trigonometrical measurements of Fuego, made by Captain Hale and revised by Poggendorff, fix its elevation at 13,108 feet. Humboldt's statement that this volcano rises above the snow-line is evidently a mistake, for that would indicate an altitude of considerably over 14,000 feet. As to the number of Guatemalan volcanoes, it has been variously given. Foledo (*Geografía de Centro-América*, 1874) puts it at 31. At least five are decidedly active. — Ed.

(7064 feet). Izalco (6152 feet), raised in 1770, has been constantly increasing in size ever since; imposing and proud, it overlooks the ocean, and when it blazes, a column of fire guides the mariner over the deep; Izalco is the "Light-house of San Salvador."

San Salvador has no space on its narrow domains for an Amazon, and Central America itself is too closely pressed upon by the two oceans to be able to send into either a stream of the first magnitude; nevertheless, the Lempa discharges an average of 17,500 cubic feet of water per second into the Pacific, the tribute of a basin of about 5600 square miles. Among the lakes of San Salvador, Ilopango preserves its Indian name, as do nearly all the localities of the country; this lake, which is only a few leagues from the city of San Salvador, resembles the Lake of the Four Forest



GUATEMALA CATHEDRAL

Cantons in its tortuousness, its constrictions, its elongated arms, and in its girdle of mountains; the summits of Ilopango have, however, neither snow nor ice like those around Lucerne, but they are lighted up at times with a lurid glare when some volcano becomes impatient; Ilopango is about $5\frac{1}{2}$ miles long, $4\frac{1}{2}$ wide, and more than 650 feet deep;¹ in former days four virgins were buried every year in its abysses, as a sacrifice to Xochiquetzal, the goddess of the waters.

The Ladinos constitute the majority of the population of San Salvador; next in

¹ In 1879-1880 a series of remarkable phenomena took place in the Lake of Ilopango. Between Dec. 31, 1879, and Jan. 11, 1880, the waters rose four feet above their level. The Jiboa, the outlet of the lake, was transformed from a slender stream into a furious torrent. Cutting for itself a way through the volcanic rock, in the course of two months the Jiboa drained Ilopango to a level $34\frac{3}{4}$ feet below the maximum. Near the middle of the lake a volcanic centre was upheaved 150 feet above the water. On the outbreak of volcanic activity, the fish sought refuge near the banks, and when the waters receded their dead bodies were left behind in such quantities that in some places hundreds of men were occupied for days in removing them, to prevent a pestilence. — Ed.

number are the Indians, who are descendants of a branch of the Mexican Aztecs, and who still speak *Nahuatl* in some of their villages. The pure Whites form scarcely a fortieth of this rapidly growing nation. The capital, San Salvador (pop. 16,000), borders the Bermenillo, not more than 30 miles distant from the Pacific, and at an altitude of 2188 feet; it lies at the foot of the Volcano of San Salvador, 6434 feet high. The greatest enemy of the towns in this isthmian America is neither fire, nor torrent, nor cannon, but the rocking of their very pedestals. San Salvador was entirely destroyed in a few seconds by an earthquake in the night of the 16th of April, 1854. The people dared not return to their home until four years later, and then they feared to rear the new metropolis wholly on the site of the old. Since its foundation, in 1528, San Salvador has experienced as many as ten earthquake shocks.

The ruins of Opico show that the ancient masters of San Salvador knew how to build huge monuments like those constructed by their hostile brothers of Guatemala, Honduras, and Yucatan.

Honduras. — **The Hondureños.** — Honduras, another Spanish-speaking Republic, embracing 46,500 square miles, with 432,000 inhabitants, separates Guatemala (on the north-west) from Nicaragua (on the south-east); it borders San Salvador on the south and south-west. Its only part in the Grand-Océan is the capacious and safe Bay of Fonseca, which mirrors the neighboring volcanoes; on the Caribbean Sea, Honduras stretches out a long line of coast with one excellent harbor, Puerto Caballos, which opens on the bell-shaped Bay of Honduras. Between the Atlantic port and the Pacific gulf is the transverse valley known as the Llanura de Comayagua, which might have given passage to an inter-oceanic canal had it not been necessary to raise the ships to an altitude of 2790 feet, and then lower them again to sea-level. It would be easier to thread the labyrinth of the Strait of Magellan, or double Cape Horn in the midst of black tempests. The mean elevation of the Honduran plateau is estimated at nearly 3300 feet, and its loftiest mountains are said to be from 6000 to 8000 feet high; it contains but two volcanoes. Beautiful rios descend from the mountains such as the Patook and Ulua, on the north, and the Choluteca, on the south.

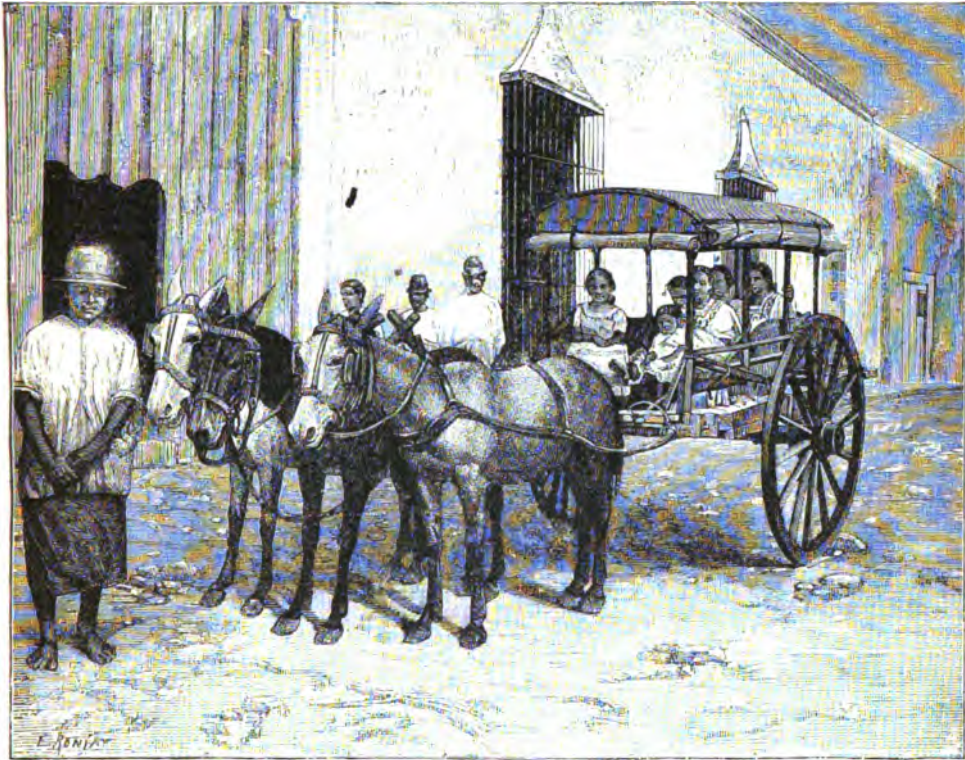
The Whites, who have come into the country since the days of the conqueror Don Gil Gonzalez Davila, the peaceable Indians, the wild Caribs and Xicaques, the Blacks, who are natives of Cuba or Jamaica, and the Mulattoes, all form but a small element of the population of Honduras; the dominant people are the Ladinos, who are sober and persevering, steeled to endurance, robust, and capable of exertion and heroism. And yet at present Honduras is asleep. When it awakes, as it surely will, the Hondurans will possess themselves of the treasures of their land; the mountains are glutted with metals, the soil is extraordinarily fruitful, and the climate is healthful, with an annual mean ranging between 55° and 68° F., according to elevation.

The ancient cities of Honduras may have possessed a certain degree of splendor, and the ruins of more than one of them point to this conclusion; but the modern towns are little more than large villages. Tegucigalpa (pop. 12,600) in the Choluteca basin, on the Pacific slope, has recently succeeded Comayagua as capital of the republic; the latter, a stunted town, is situated near the remarkable ruins of Tenampua, in the Comayagua valley, at an altitude of about 2000 feet, on a rio of the Ulua basin. The Ulua receives nearly a third of the waters of Honduras.

Nicaragua. — **The Nicaraguans.** — It was the Conquistador Don Hernando Ponce who led the Spaniards to the conquest of the region which afterward became the largest state of Central America. It extends over 51,660 square miles, but supports

hardly 313,000 inhabitants, who live in indolence under warm and charming skies. This triangular country lies between the Atlantic and Pacific, north of Costa Rica and south of Honduras. It is the lowest and most tropical portion of Central America. Almost all its waters flow to the Atlantic,—in the north, through the Segovia or Coco, a stream with a mean discharge of 17,500 cubic feet; in the centre, through various rios; and in the south through the San Juan, the outlet of the famous Lake Nicaragua.

Lake Nicaragua, with its 3200 square miles of surface, at an altitude of 130 feet and encircled by volcanoes, is equal to fourteen Lake Lemans, and a somewhat marshy



A NICARAGUAN CARRIAGE.

rio 20 miles long pours into it, the tribute of a lesser lake nearly three times the size of the Lake of Geneva; it has no depressions, like those of the blue Swiss basin, for the sounding-line sinks here to a depth of only 260 feet. Out of its glistening waves, which rise and break in the wind almost like ocean-billows, tower three extinct cones, Zapatera, Madera, and Ometepe. Lake Managua, whose surplus waters are discharged into Lake Nicaragua through the Tipatapa, fills a cup of 560 square miles, 154 to 157 feet above sea-level, at the base of beautiful mountains, one of which is the celebrated Momotombo (7000 feet). Momotombo, according to legendary accounts, is the only volcano in Central America which did not permit any of the priests sent to baptize its crater to descend into its jaws a second time.

These lakes are connected with the Atlantic by a broad stream, but they sleep

close to the Pacific, into which, apparently, a slight shock would precipitate them, for the ridge separating them from the great ocean is low and very slender. The river which drains them, the San Juan, discharges an average of 17,500 cubic feet per second, and 9250 at low water. This depression, therefore, forms a natural route for a ship-canal connecting the Atlantic and Pacific, the construction of which has been agitated at times by different nations for more than three centuries. Such a canal is, in fact, in process of construction here, under the control of a company chartered by the government of the United States in February, 1889, and after liberal concessions had already been granted by Nicaragua and Costa Rica. The total length of the route is 169.5 miles; out of this, 142 miles are included in the San Juan, Lake Nicaragua and other streams and basins. The summit of the portion of the canal actually to be cut is to be reached by three locks on either side occupying three-fourths of a mile. The work is being pushed forward with great energy.

Nicaragua has in all twenty volcanoes. The loftiest, Telica, rises to the height of 7162 feet; the most dreaded, Coseguina, which has an altitude of 3800 feet, or according to some estimates of 2851, overlooks the Gulf of Fonseca. In 1835 it was the scene of one of the most tremendous eruptions on record; the outbreak lasted four days, during which a vast tract of land and sea was covered with ashes.

The races are much mixed; the Ladinos constitute, it is said, three-fifths of the nation, the pure Indians a fourth, the Blacks and Mulattoes a seventeenth, and the pure Whites, largely of Galician origin, a twenty-fifth. A few tribes of the interior, several of which have sprung from Aztec stock, still speak the dialects of their ancestors,—among others, the savage Mosquitos; but, as a whole, the inhabitants of Nicaragua have adopted the Spanish language. The blacks prefer the hot regions to the high plains, where those in whose veins are a few drops of *sangre azul* live from choice. The Nicaraguans are inferior to the other Central Americans; they are more indolent and not as handsome.

The capital, Managua (pop. 18,000), on the shores of a lake of the same name, scarcely outranks Granada near Lake Nicaragua, and it is considerably smaller than Leon (pop. 25,000) the former capital and the "monumental" city of the republic.

Costa Rica.—**The Costa Ricans.**—About 214,000 men give the name of fatherland to this state of 19,985 square miles, the most southern of Central America. It was at first called Costa de los Contrastes, Coast of Obstructions, but afterward received the appellation of Rich Coast, doubtless because it was supposed to abound in wealth-producing metals. The surface is a lofty table-land, a prolongation of the plateau of Veragua; this latter plain, 2000 to 3300 feet in altitude, begins at the Panama depression and ought to belong to Central America rather than to the United States of Colombia. Veragua is the Golden Castile of Columbus and the Conquistadores. Twelve volcanoes, four of which are still very dangerous, rise from the Costa Rican plateaus; a thickly wooded cordillera also overlooks these plains at a mean elevation of 6500 feet. The noblest among the volcanoes are Turrialba (11,270 feet, possibly 12,507), Irazu (11,500 feet), near the city of Cartago and visible from both seas, and Pico Blanco (11,739 feet) not far from the Veraguan frontiers. The principal table-land, that of Cartago, is between 4100 and 5250 feet above the sea.

The Costa Ricans are almost exclusively pure Whites; one man in five among the peasants and one in twenty, at the utmost, among the townsmen, bear some slight traces of a mixture of Indian blood with the Spanish,—and Spanish here means Galician. The ancestors of this small nation came largely from the rainy north-



CENTRAL AMERICAN ABORIGINES.

western peninsula of Iberia, from the land of the little people who seek their little fortune in Portugal, Spain, and beyond the seas. However, the country has its *Indios bravos*, — the Guatusos and the Talamancas. The Costa Ricans are comely, polite, gentle, faithful to their word, very frugal, and somewhat close-fisted, like their Galician kinsmen. The table-land on which they are multiplying is, unfortunately, very narrow, and a slight descent from it, whether toward the Pacific or the Atlantic, brings one into valleys where energy of body and health of soul are impaired by the heat of the tenth parallel of latitude. Costa Rica is too limited in extent for its people to hope for a great future.

The capital, San José, only a century old, is a town of 18,000 souls, situated at an altitude of 4226 feet, 60 miles from the Pacific seaport of Puntas Arenas, and 76 from the Atlantic port of Limon; it superseded Cartago, a city of 12,000 inhabitants, which is forever menaced by the volcano of Irazu, and which has already been twice dismantled since the settlement of San José.

British Honduras. — The 7562 square miles of British Honduras stretch along the Bay of Honduras, east of Guatemala and Yucatan; it is a land of forests and swamps, of blazing suns and tropical nature. Indians, Half-castes, and Negroes respectively outnumber the Whites here, and in all there are scarcely 27,700 inhabitants; the Castilian tongue is steadily making its way among all classes, owing to Spanish immigration from the five neighboring republics and from "ever faithful" Cuba. Balize, the capital, on the Bay of Honduras, is a town of 5800 souls.

THE ANTILLES.

The American Mediterranean. — Between the two Americas glistens the Mediterranean of the New World. It is much larger¹ than the glorious inland sea of Europe, but it is less closely land-locked, and it separates two half-continent, instead of three great divisions of the globe. Like the classical Mediterranean, which has two clearly defined divisions joined by the broad strait between Tunis and Sicily, the Mediterranean of America comprises two basins: on the north-west the Gulf of Mexico, on the south-east the Caribbean Sea. The Channel of Yucatan, a wide pass between the dumpy peninsula of Yucatan, on the west, and the Island of Cuba, on the east, unites the two bodies of water. On the north, this inland sea bathes the flat coasts of the United States, which pour into it their "father of waters," the turbid Mississippi; on the south, Colombia and Venezuela cast the shadow of their sierras on its coast; on the west, Mexico and Central America separate it from the Pacific by three terraces of *tierras* rising from the infected seaboard; on the east, from the Florida Reefs to the mouths of the mighty Orinoco, the Antilles, a chain of islands ranging in magnitude from an empire to an islet, divide its waters from those of the Atlantic. These islands are perhaps remnants of a vast submerged tract, for their flora and fauna differ widely from those of both Americas.

Climate of the Antilles. — **Negroes, Whites, and Mulattoes.** — The Antilles lie between the 10th and 27th parallels of north latitude. On an area of about 94,500

¹ About 1,775,000 square miles, against less than 1,125,000.

square miles their inhabitants number less than $5\frac{1}{2}$ million; a fourth of these are Whites. The islands have retained the name of West Indies, a title given them at the time of their discovery by Christopher Columbus, who supposed that they were a prolongation of that India whose treasures and spices Spain coveted. They bear, moreover, a slight resemblance to the Gangetic peninsula; they spring out of tropical waters, their vegetation is brilliant, their forests exuberant, their climate hot and tempestuous, the yearly rainfall on certain mountains is nearly 400 inches,—and yellow fever is as deadly in the Antilles as cholera is in India. Most of the islands rise as mountains. The smaller ones are either limestone or of volcanic formation; seven



A GENERAL VIEW OF HAVANA.

fiery summits are still active, and earthquakes are frequent and destructive. Baleful hurricanes often visit the archipelago; in the eighteenth century a tornado caused frightful havoc in the French island of Martinique, destroying four thousand seamen and forty ships, and burying nine thousand victims under the ruined towns; the same typhoon swept over Barbadoes, leaving death in its path, and it swallowed up a British fleet with six thousand mariners before Saint Lucia. But, on the other hand, nowhere are the skies more brilliant, the stars more resplendent, the breezes warmer and balmier, than on these tempest-ravaged shores. The climate of the seaboard is, however, blighting to such Whites as imprudently brave it; fortunately, owing to their promontories, peaks, and mountains, the Antilles, like Latin America, which they face on the west and north, have Temperate Lands above the Hot Lands,

and Cold Lands above the Temperate. The European finds here, at an altitude of a few hundred feet, the climate of the Mediterranean coasts; higher still he encounters cold weather, and in places even a little snow. The low regions, with their rainy, leaden skies, are suited to the Negroes and Mulattoes, who together constitute nearly three-fourths of the motley nation of the Antilles.

The ancestors of the Negroes of the Antilles were slaves brought in shackles across the seas from Africa, to replace the savage and warlike Caribs, who diminished so rapidly under the cruel treatment of their masters that out of more than a million Haytians, it is said, scarce one hundred fifty thousand remained a quarter of a century after the Spanish conquest; we have this story from the chronicles, which always exaggerate. For nearly three and a half centuries, the Blacks toiled in the Antilles under the driver's whip, in the sugar-cane, coffee, cacao, tobacco, and cotton fields, where the most dazzling fortunes of Europe were for a long time amassed. Free to-day in the French, Dutch, and British Antilles, and on the eve of becoming so in the Spanish isles, they protest by a haughty indolence against the servitude and the injustice which bent generations of their forefathers over the soil. To fill their places the planters import coolies from India or China. On two small islands, Dominica and Saint Vincent, are a few genuine Carib families (twenty-five or twenty-six in all), and thousands of the race, more or less tinged with black blood, are said to exist in the north of Hayti. Everywhere else these Indians have gone down to the grave, — and Spain is guilty of their murder. The name Caribs is a corruption of *Calinagos*, the correct appellation of the people. They belong to the great family of the Guaranis.¹

Hayti is independent of all European and American powers, but it is French in the speech of two-thirds of its inhabitants, and Spanish in that of the other one-third. The rest of the Antilles belong to Spain, England, France, Holland, or Denmark. The Blacks of the different islands have adopted the language and the form of Christianity of that European nation which first colonized their island; but they have introduced into their Christian creeds all sorts of African superstitions, notions, and beliefs, and they have reduced their Spanish, English, and French to weak, formless, grammarless jargons. To sum up, Spanish is spoken in this little world by nearly 2,600,000 people, French by more than a million, and English by something less than a million.

THE SPANISH ANTILLES.

The Spanish Antilles, embracing Cuba and Porto Rico, comprise 49,479 square miles, a little more than one-half the area of the entire archipelago; their inhabitants number 2,899,000 (of whom 1,300,000 are Whites, or are rated as such), somewhat less than half the population of all these islands.

Cuba has no rival in wealth and size among the other Antilles. It is about equally

¹ It is still an open question whether any affinity exists between the Caribs and the Guaranis (a people inhabiting the immense region stretching from the Amazon to the Pampas of Buenos Ayres). The Caribs call themselves, in their own tongue, *Calinago*, *Carinago*, *Calliponam*, and, in an abbreviated form, *Calina*, signifying "warrior," "a brave and valiant man." From these names Columbus formed the word *Caribales*, and the latter transformed into *Canibales* gave us "cannibal," a term expressive of one of the inhuman practices of the Caribs. Carib, it is said, is possibly the same word as Guaraní, for both mean "warrior." — Ed.

distant from Florida and Yucatan. It is separated from the first by the Florida Channel, 125 to 140 miles wide, and from the Mexican mainland by the Channel of Yucatan. When Columbus set foot on Cuban shores, in the month of October, 1492, he found 200,000 Indians, or, according to other estimates, 500,000, or even a million.



AN AVENUE OF PALMS IN CUBA.

These inoffensive savages yielded tamely to the conqueror, stretched out their necks to the rope, and perished all the sooner for their pliancy. It was in 1512 that the Spaniards established themselves permanently in the island of Fernandina, as they then designated the land which Columbus had called Juana, and which afterward received the names of Santiago and Ave Maria, before adopting that of Cuba.

Twelve years later, the enslaved race had been reduced to 20,000 men. In 1560 it was apparently extinct, but this half-century had not wholly effaced their names from the book of life; already many half-breeds had sprung from the union of the conquerors with Indian women, and it is thought that a portion of the mountaineers of the eastern department are of genuine Cuban and American descent. Long years passed before the destroying nation began to restore life to the desert it had created. The marvellous land which afterward became the "Queen of the Antilles" could not retain its hold on the gloomy sons of the steppes of Castile, La Mancha, and Estremadura, any more than on the joyous Andalusians. How could it when there were countries of magic renown on the continent, — Mexico, Peru, and that never attained El Dorado, in comparison with whose treasures all the wealth of the empire of the Incas was poverty itself? The Spanish settlement acquired no stability until toward the end of the seventeenth century. At that period, Jamaica, one of the Greater Antilles belonging to Spain, fell into the hands of the heretical English, and 1500 Spaniards¹ abandoned the island for Cuba, where they found once more their own language, their own religion, and their native government, under the shelter of the thick walls of Havana. At the end of the eighteenth century and in the early years of the nineteenth, Cuba received thousands of French from San Domingo, who came as voluntary exiles from the vengeance of the Blacks.

The island is 800 miles long from west to east, 25 wide in the narrowest portion, and scarcely more than 90 in the broadest; it embraces 45,870 square miles, including its entire cortege of islands, one of which, Pinos, has an area of 1215 square miles. Its inhabitants number 1,522,000. The finest Cuban ports are Havana, Cienfuegos, Nuevitas, Nipe, Bahia Honda, Malagueta, Puerto del Padre, and Manati. From these ports we look out on *vegas*, hills, and mountains. The *vegas*, that is, irrigated plains or valleys and stretches of plantations, are miracles of fruitfulness; hills, rarely rising above 325 feet, occupy a considerable part of Cuba; among the mountains, the Pico de Turquino (8400 feet) is the loftiest. It rises at the extreme south of the island, facing the peaks of Jamaica. On many of the higher summits, and in many of the valleys which are exposed to the moist winds, the annual rainfall is 150 inches; in other localities it is 120, 75, or even as low as 36; yet even this last fall suffices for the ripening of two crops of maize yearly, for the growth of rice, for the maturing of sugar-cane, and for the perfecting of a world-renowned tobacco.

Notwithstanding the enervating heat of such lowlands as are never fanned by the sea-breezes, notwithstanding the visitations of yellow fever, Cuba contains more Whites than Blacks; this may be due to the healthfulness of the climate, or to the fact that the settlers nearly all came from southern lands and therefore have little to fear from the heat of the tropics. Out of 1,522,000 inhabitants, 988,000 have no Black blood (or very little), and with the exception of the years when the frightful *vómito negro* throws all the families into mourning, these Whites furnish an average annually of 41 births to 24 deaths in every thousand persons. The white Cubans call themselves Spaniards, they or their ancestors having come from Spain, from the Canaries, or from different parts of Latin America, such as Mexico or Venezuela; those among them who were born in the proud Peninsula, especially in Galicia, Catalonia, Andalusia, or in the Basque lands, bear the name of Peninsulars; 25,000 trace their origin to the Canary Islands. The Peninsulars are not loved in the "ever faithful" island, as the Spaniards were wont to speak of Cuba before the outbreak of

¹ Some say 8000.

that war which, though furious and devastating, nevertheless failed to establish Cuban independence. However, since the blood of the Cubans has reddened the flow of their rios, they remember that they know how to die for their country, and herein lies the germ of future liberty. During those ten years of savage slaughter, many of the magnificent plantations which made Cuba the "Queen of the Antilles" were ruined. With the restoration of peace there is a revival of prosperity, and cultivation is again taking possession of the vegas, through the toil of the Blacks (whose legal emancipation is approaching), and through that of the ill-treated Chinese laborers. The coolies number 44,000, the Negroes 489,000.

Among those Whites who are not Spaniards by birth or by descent, we find a very large number of Gascons, so that pure French and Creole French — both also in use among the families originating in San Domingo — are spoken along with Castilian in a great many haciendas, especially about Guantanamo and Santiago de Cuba. All of the French-speaking population understand Spanish.

Havana (pop. 200,000), the capital of the island and a cigar-manufacturing centre, lies on a capacious bay on the northern coast, nearly opposite the Florida Reefs. Like all the rest of Cuba, it has the delightful, enervating climate of a sea-girt country lying between the 20th parallel and the tropic of Cancer.

Porto Rico. — Jamaica, the natural satellite of Cuba, owes allegiance to the English and not to the Spaniards; Porto Rico, the political satellite of the "ever faithful" island, is separated from it by the entire mass of Hayti. Seven degrees of longitude lie between these two divisions of the Spanish Antilles. Porto Rico embraces about 3600 square miles, and is almost a perfect parallelogram in figure; it is separated from the Dominican shores of Hayti by Mona Passage, 90 miles wide. This charming and healthful island rears no lofty sierras; the highest of its wooded mountains, El Yunque, has an altitude of only 3675 feet.

Porto Rico is not more than a twelfth or a thirteenth the size of Cuba, but it contains above half as many inhabitants. With a population of 807,000, it has nearly 224 persons to the square mile. As in Cuba, the Whites have the preponderance; they number 425,000. The rest are Blacks and Mulattoes. The majority of the Whites are of Spanish descent; there are a few thousand Italians, Corsicans, and French, and also a small number of Chinese. As for the Indians, they disappeared centuries ago, and in this unhistoric land not a monument, not a sepulchre, not a name recalls to the posterity of the proscribers the memory of that race which their ancestors laid so speedily in the cemetery of forgotten nations. — San Juan Bautista (pop. 25,000), the capital, occupies an islet of the northern coast. — Ponce, a larger town, contains nearly 40,000 inhabitants.

HAYTI.

The Haytian Republic. — The Dominican Republic. — In truth, the "Queen of the Antilles" is not the rich and blood-stained island of Cuba, but Hayti, more blood-stained still, and more exuberant; yet, though nature has lavished upon it her wealth, man keeps the island poor. The Negroes and Mulattoes neither plant nor sow, and they can scarcely be said to live in this country "created by God, but governed by the devil." Hayti lies on the path between Cuba and Porto Rico, 53 miles from the

first, 75 from the second, 110 from Jamaica, and 350 north of the nearest American promontory, Cape Goajira, — the most northern point of a peninsula belonging partly to Colombia and partly to Venezuela. Its greatest length is 400 miles, its greatest breadth 160. Hayti comprises 29,828 square miles,¹ and has a coast-line of 1800 miles — almost the same as that of France. The inhabitants number 850,000 or 900,000, or perhaps even a million. The western portion of the island is French in speech, the eastern Spanish; its surface is everywhere mountainous, and the scenery is imposing and magnificent.

The old Indian name of Hayti ("mountainous country") was revived after the island had been successively called Hispaniola or Little Spain (the appellation bestowed upon it by Columbus), Saint Domingue (so designated by the French colonists), and Santo Domingo (thus named by the Spaniards). Its mountains rise in three parallel chains, which reach the height of 8940 feet in the long peninsula of Tiburon, and 10,302 feet in Loma Tina, near the southern shore; this latter eminence is the loftiest in the Antilles, so far as known, though the Pico del Yaqui is spoken of as having an altitude of 13,632 feet (?). Such sierras, in an excessively wet climate with two rainy seasons each year, give rise to rivers of great volume, though they are necessarily very short; however, the length of the Artibonite is estimated at 250 miles.

This favored island bears two peoples, who speak two dissimilar languages and have two different histories. It is divided into a West and an East, the latter the more extensive, the former the more populous. The West is French, or rather French-speaking, or, to be more accurate still, its Negroes make use of a Franco-Negro patois, and French is the language of their schools, their books, newspapers, and proclamations; they call themselves Frenchmen, and feel themselves such, in spite of French injustice to them, and in spite of the sea of blood that lies between the two peoples. The official title of this old colony of Saint Domingue is Hayti; it is also sometimes called the "Black Republic." It occupies a small portion of the body of the island, and two long peninsulas resembling two lobster-claws, one of which has been half removed. The shorter northern claw extends to within 53 miles of Cuba, the southern is stretched out toward Jamaica, which is farther away than the great Spanish dependency. The Haytian Republic embraces less than a third of the independent island of Hayti or San Domingo (9232 square miles out of 29,828), but it possesses 975 miles of coast-line, while the Dominican Republic has only 826; and two-thirds of all the inhabitants, — 550,000 to 600,000, out of 850,000 to 900,000, — belong to the western state. Nevertheless, the latter is almost uninhabited except along the sea-shore and in a few valleys like that of the Artibonite.

The small island of Tortuga, near the north-western shore and close to Windward Passage, which separates Hayti from Cuba, served as a refuge for French adventurers in the first half of the seventeenth century. During the many wars waged at that period between France and Spain, these fortune-seekers, pirates, buccaneers, or *chasseurs* attacked, on their own responsibility, the great island which then belonged wholly to Castile and Leon. Before the close of the century, the western peninsulas and the valley of the Artibonite had been conquered by them, and the treaty of Ryswick made these sections French soil. From 1697 (the date of the treaty) until 1789, the colony was in a most prosperous condition, and the English, Spaniards, Portuguese, and Dutch all jealously recognized in it the model settlement. But 1789

¹ Including the adjacent islands, among others Gonaive (288 sq. m.) and Tortuga (117 sq. m.).

came, followed by tragic years,—civil war, the guillotine, the struggle of France against Europe; and while the French were fighting for their altars¹ and their firesides, slavery was abolished in their colonies. In Hayti, the newly acquired liberty was the bright dawn of a day which set in gloom; a war of races broke out, and the Negroes soon slaughtered and extirpated the planters. The few who escaped were dispersed. Some crossed the Windward Passage and settled in Cuba; others preferred the French-speaking Antilles,—Dominica, Saint Lucia, Guadeloupe, and Martinique; some became the founders of the little Creole nation of Trinidad; others set sail for



HAYTIAN TYPES.

Louisiana, and others still returned to France. Some years later, a powerful French army embarked for Saint Domingue.² This well organized force, composed of the conquerors of Europe, was more formidable than the Negroes whom it was sent to

¹ In truth, there were no altars at that time.

² This force, commanded by General Leclerc, was sent out in 1801 by Bonaparte, who was then first consul of France, and who had determined to subdue Hayti and restore slavery. The Negroes acted under the leadership of Toussaint l'Ouverture, who, having already made himself master of the country, had adopted a constitutional form of government, in which he was recognized as president for life. The Blacks were soon driven to the mountains by the French, but the war was kept up until, through the treachery of Leclerc, a truce was declared; during the suspension of hostilities, Toussaint was seized and sent to France, where he died in prison (1803). Infuriated by this act of bad faith on the part of the French general, the Blacks renewed the struggle under Dessalines, with terrible barbarity. Then a British fleet appeared off the coast. Weakened by the havoc made by the climate among the troops, and finding themselves unable to cope with the British, in 1803 the French agreed to evacuate the island.—Ed.

subjugate, but the hostile climate proved fatal to it: the soldiers melted away under the sky of the Antilles, and at length—their numbers decimated by sunstroke, fever, and dysentery—they surrendered to the English, who had just revived the war against France.

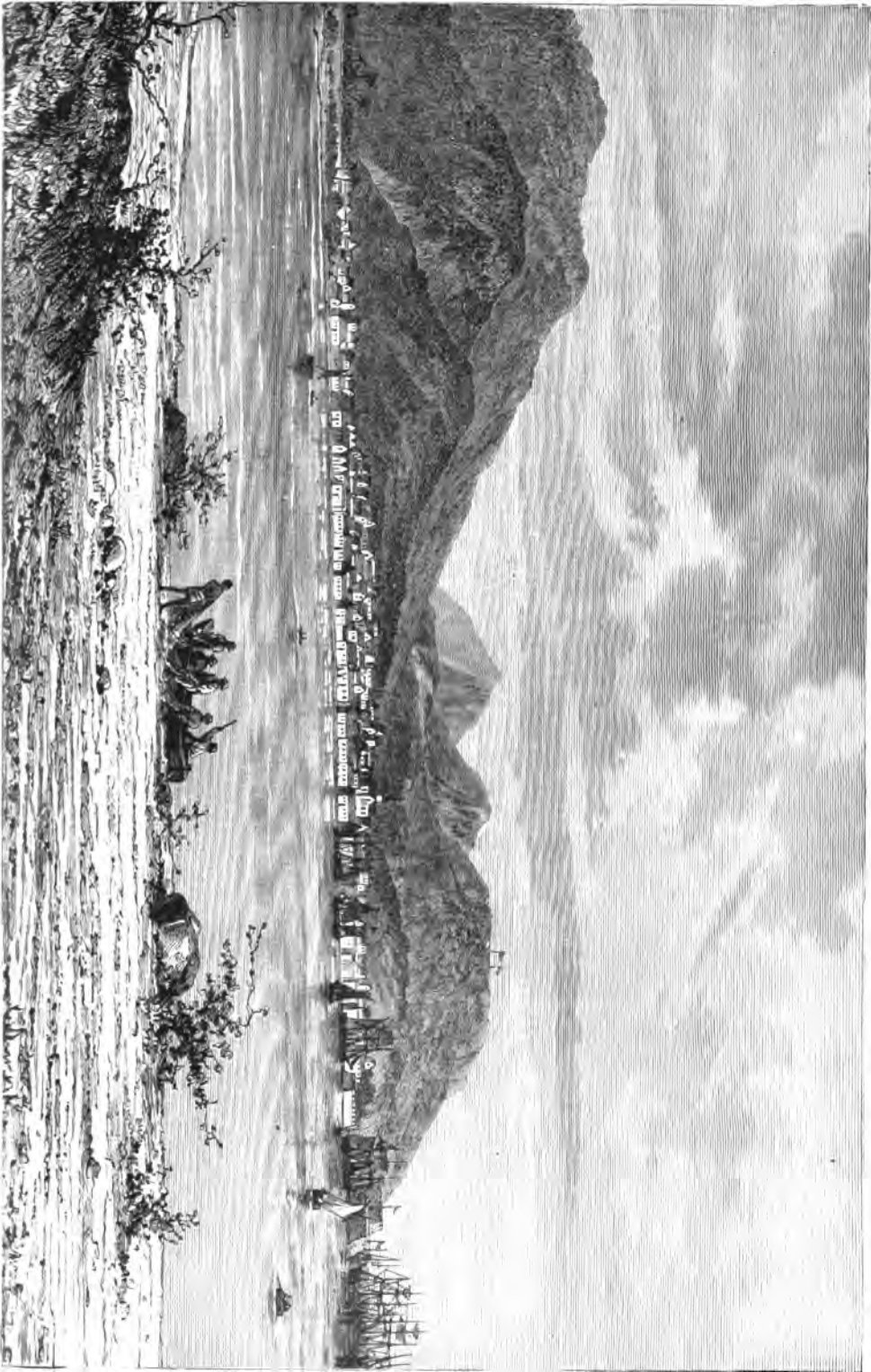
Since the Blacks and half-castes have had the destiny of Hayti in their hands, they have not made it (as was expected of them) the guiding star of their race. Neither from the other Antilles, nor from the lower Mississippi, nor from Guiana, nor from Brazil, nor from the far-away African shores, do their brethren look to them for an



HAYTIAN WOMEN.

example of wisdom and achievement. The Haytian people had their birth in vengeance, and they have lived in hate. After having proscribed the Whites, they turned against one another, Mulatto against Negro, Negro against Mulatto, and,—as in other countries,—liberal against conservative, and the more advanced against the more moderate (terms which, here as elsewhere, are devoid of deep meaning). Owing to civil wars, the little nation is perhaps no larger than it was a hundred years ago, when it comprised from 30,000 to 35,000 Whites, 27,000 Mulattoes, and 500,000 Blacks.

Port-au-Prince is the capital city of these more than bronzed Frenchmen, these very childish and superstitious Roman Catholics, the great majority of whom display more fervor in their worship of the voodoo serpent than in their efforts to follow in



A GENERAL VIEW OF CAPE HAYTIEN.

spirit and truth the teachings of the catechism. Port-au-Prince is a town of 40,000 inhabitants, situated in a stormy region at the head of the Gulf of Gonaive. — In colonial times, the metropolis of the island was Cape Haytien, on the northern seaboard.

The Dominican Republic, which is of Spanish speech, occupies the centre and east of Hayti; it comprises 20,596 square miles and contains 300,000 inhabitants.¹ Magnificent forests of mahogany, cedar, ebony, and other woods of priceless value descend to the plains along the mountain-slopes. This was the first Castilian settlement in America. The colony began in great splendor; hidalgos, adventurers, gold-seekers, and missionaries from the Iberian Peninsula flocked thither by thousands, and founded flourishing towns. In twelve or fifteen years the Caribs dwindled, it is said, from 900,000 to 60,000; their number forty-one years after the discovery of the island is rated at 4000. The Carib race, however, survived. The Spaniards came to the New World to get gold and not to found families; they allied themselves with Carib women, and the Dominican nation owes its origin to the union of Europeans and Indians rather than to a mixture of Whites and Negroes. The reverse is true in the Haytian Republic, where the Carib blood has almost wholly disappeared, where the black element is almost nine times as great as the mulatto, and where the white element has ceased to exist.

Cortes was for some time a functionary in a town of San Domingo. After the conquest of Mexico, the Dominicans, dazzled by the great fortune of Cortes, emigrated in multitudes to the continent, and the colony, till then so flourishing, seemed on the eve of perishing. It has never regained the vigor of its early years; civil warfare, the conflicts with the neighboring state, and the indolence of its inhabitants, have prevented a revival of prosperity. However, during the last few years, Whites from Cuba, Porto Rico, and Jamaica have been stirring the Dominicans out of their apathy. The entire population, estimated at 300,000 souls, professes the Roman Catholic faith, and speaks the Spanish language. — The capital, Santo Domingo (pop. 16,000), lies on the south coast, at the mouth of the river Ozama.

THE FRENCH ANTILLES.

Not all the Antilles of French speech belong to France. To say nothing of the "Black Republic," the French language prevails more or less exclusively in several of the Lesser Antilles, which are at present subject to the British, — in Dominica, Saint Lucia, Grenada, and Trinidad. Guadeloupe and Martinique, together with the different islets dependent upon the former — in all, 1103 square miles, with 341,000 inhabitants — constitute the remnant of the French possessions in the Antilles.

Guadeloupe is a Spanish name; Columbus, who discovered the island in 1493, consecrated it to the Holy Virgin of Guadalupe, who was then and is still venerated in more than one Spanish church. The 16th parallel of latitude passes over Guadeloupe, or rather over Guadeloupe proper or Basse-Terre, the more southern of the two islands of which this French dependency is composed. The more northern is called Grande-Terre. These islands are separated by an arm of the sea, named La

¹ Official, though unreliable, estimates give: Hayti, 800,000; San Domingo, 504,000. — Ed.

Rivière Salée. Grande-Terre (253 sq. m.) is the smaller and less attractive of the two. Streams, woods, and hills are wanting to it; the inhabitants live in fear of droughts, and they know how earthquakes can level villages. Guadeloupe, or Basse-Terre (365 sq. m.), is also subject to earthquake shocks, but it is as beautiful as Grande-Terre is ugly, — with mountain-gorges, forests, extinct volcanoes, and torrents fed by a rainfall of 86 inches; the surface rises to the height of 4870 feet in the peaks of La Soufrière. These two islands constitute the body of the colony, but it has scattered dependencies: Désirade, an extinct volcano covering 11 square miles; Marie-Galante (58 sq. m.); Les Saintes, comprising 6 square miles in five islands that bristle with cannon; and far away to the north, near the 18th parallel, surrounded by English islands, Saint-Barthélemy (8 sq. m.), an islet destitute of water and formerly a volcano; and, lastly, the larger half of Saint Martin, embracing about 21 square miles; — the other half belongs to Holland.

In all, Guadeloupe contains 722 square miles, with 165,000 inhabitants. The Whites, Blacks, and Mulattoes are distributed in the ratio of 7 Whites, 31 Blacks, and 62 Mulattoes in every hundred persons. Beside these, there are coolies brought from India, Anam, China, and Africa. Roman Catholicism is almost the only religion professed, and French is the sole language spoken. — Basse-Terre (pop. 10,000), in Guadeloupe, is the capital, but it is a smaller town than Pointe-à-Pitre (pop. 15,000), in Grande-Terre.

Martinique lies 60 miles south-east of Guadeloupe. With its volcanoes, its dense woods, its rivers and cataracts fed by an annual rainfall of 85 inches, this island is enchanting. Though it embraces not more than 381 square miles, it contains 175,000 inhabitants, or nearly 460 to the square mile; and yet the entire island is by no means under cultivation; the 255 square miles of uplands are covered with forests, rocks, brakes, and grass through which glide deadly serpents. Earthquake visitations are as frequent as in Guadeloupe.

Among the 175,000 islanders there are scarcely 10,000 Whites, though in 1750 they numbered 15,000; the coast-lands of Martinique as well as those of Guadeloupe are unsuited to Frenchmen. The climate is stifling, with an annual mean of 80.6° F. As the surface reaches an elevation of 4430 feet, in Mont Pelée, the island has its Temperate Lands, and there are even cool regions to which the planters do not ascend. The mass of the population is composed of French-speaking Blacks and half-castes of various grades; next in number are the laborers imported from Asia or Africa. — Fort-de-France (pop. 11,000), the capital and a superb port, has just one-half the population of Saint Pierre (pop. 22,000).

THE BRITISH ANTILLES.

Jamaica. — Jamaica lies under the 18th parallel, directly west of Porto Rico and Hayti, 87 miles from Cuba, 84 from Hayti, and 394 from the Nicaraguan promontory Cape Gracias-à-Dios. It outranks every other island of the British Antilles both in size and population; its greatest length is 143 miles, its width from 30 to 37, and its coast-line 500. Of the 639,500 inhabitants occupying its 4193 square miles, only 14,000 are classed as Whites (they numbered 28,000 toward the close of the last century),

and these 14,000 are of various hues of complexion; many are even black, for at every census Negroes who lack but little of being sooty enroll themselves among the Whites. The half-castes of Latin America do the same; it is what the conquered and down-trodden everywhere have done since the dawn of history. Jamaica seems destined to be occupied by the Negroes, and here, as in most of the other Antilles, the white families (at least those dwelling in the lowlands) will probably gradually become extinct. The Spaniards, better adapted to life in a tropical clime than the English, would surely have established their race here, but these first colonizers quitted the island when England became its mistress (1655).

The old Indian name *Xaimaca* signifies, we are told, the Land of Wood and Water; the country does indeed abound in torrents, for copious rains fall on the high sandstone and limestone mountains. None of the summits of Jamaica rises above the snow-line. Toward the east of the island, in the Blue Mountains, Cold Ridge reaches an elevation of 8163 feet and Great Cascade is 7746 feet above sea-level. It is in the plains, valleys, and cañons along the coast, and not in the Temperate Lands on the shoulders of the mountains, nor in the cool zone on their tops, that the white man suffers from the heavy, tempestuous, debilitating heat — from fever, dysentery, and the *vómito negro*. Climbing along the mountain-flanks one finds, at varying altitudes, the climate best suited to his age, his physical condition, or his constitution; but founders of colonies have always been fortune-seekers, — they settle wherever gold grows — on the coast, in the plains, under a vertical sun if that sun fructifies. And it was in the lowlands that the English colonized Jamaica. The Blacks were brought into the island after 1558, at which period the aboriginal race had already been consumed in the service of the conquerors — except such part of the Indian blood as had entered the proud families of the invaders through native women. When the Englishman had driven out the Spaniards, he inundated the island with Africans, and between 1680 and 1807¹ 2,830,000 ebony-skins were engulfed here; yet, in 1838, when the emancipation of the slaves was finally effected, only 311,000 Africans were found on this Negro-devouring soil. The Blacks of Jamaica pass for Christians — Protestants or Roman Catholics (there are, however, a few Jews), but the large majority hold extravagant beliefs imported from Africa. Down to the present time, owing to an indolence which finds some excuse in the brilliancy of the climate, they have proved incapable of bringing the entire island under cultivation; scarcely a fifth of the land is utilized for cattle-raising and for the cultivation of coffee, maize, and sugar-cane. Beside the Blacks, 15,000 to 20,000 coolies are employed on the large estates, at the expense of the Whites, who import them from India and China. — The name of the capital, Spanish Town, recalls the fact that the Castilians preceded the English as rulers of Jamaica; when the Peninsulars were the dominant nation in the "Land of Wood and Water," this town was called Santiago de la Vega.

The British Lesser Antilles. — These islands, which are for the most part small, are very numerous. They stretch from Porto Rico to Trinidad (which nearly touches South America) in the form of an arc of a circle, and they constitute a sort of break-water to the Caribbean Sea.

The Virgin Islands, east of Porto Rico, contain only 5000 inhabitants — 120 of whom are Whites — on 64 square miles. The largest island of the group is called Tortola, a Spanish name.

Saint Christopher, or Saint Kitt's, covers 68 square miles. Mount Misery, an

¹ The date of the abolishment of the slave-trade.

extinct volcano, rises here to an altitude of 3701 feet. With Anguilla (35 sq. m.) Saint Kitt's forms a little government of 103 square miles, with a population of 32,000.

Nevis, together with Redonda, contains 12,000 inhabitants, on about 50 square miles of well watered territory; it is a volcano nearly 2500 feet in height. The climate is healthful.

Antigua, embracing about 108 square miles, with 34,000 inhabitants, bears the name of an old church of Seville, a name bestowed upon it by the famous Genoese. It consists of limestone, and is destitute of rivers and fountains; the highest elevation is not more than 889 feet. Its dependency, Barbuda, is low (200 feet), and contains less than 1000 inhabitants on 75 square miles of surface. Barbuda became the private property of an English family (the Codrington family) in 1680; it has been leased for a number of years to two wealthy English sportsmen. The capital of Antigua and Barbuda (embracing together about 180 square miles, with 34,964 souls) is Saint John's (pop. 10,000). This city controls at the same time the entire Leeward group, which includes the Virgin Islands, Saint Christopher and Anguilla, Nevis and Redonda, Antigua and Barbuda, Montserrat and Dominica — or nearly 725 square miles, with about 124,000 islanders (2500 of whom are Whites).

Montserrat was so named by Columbus because of its resemblance to the Catalan Montserrat, or Monserrat; it is volcanic, and its peak of La Soufrière still emits vapors. It has an area of 47 square miles, and contains 11,400 inhabitants; among these are a few Whites, who are said to be of Irish origin.

Dominica lies between the two French dependencies of Guadeloupe and Martinique. It belonged at one time to France, and it has remained French in speech. On its 275 square miles dwell 28,800 people, some few of whom (perhaps about twenty families) are of pure Carib blood; these Indians speak the Creole of the island. There was formerly a boiling lake in an old crater of Dominica, but it ceased to exist in 1880. Among the mountain-peaks, Diablotin, an extinct volcano, rises to the height of 5900 feet. The capital is Roseau (pop. 5000).

Saint Lucia, south of Martinique, embraces 243 square miles, and contains perhaps 1000 Whites and 43,000 Blacks. It was once a colony of France, and the islanders still make use of the French language. The forests are infested with the venomous *bothrops*, or "rat-tails," a species of serpents to be found nowhere else except on the island of Martinique. The climate of Saint Lucia is damp; torrents flow down from its volcanic masses, which are dominated by the two peaks of La Soufrière.

Saint Vincent (140 sq. m.) has mountains 4000 feet high, woods, rivers, a fine climate, superb palms, fields of sugar-cane, and one active volcano, called Morne Garrou. Among the 48,000 islanders are 8000 Whites, — in part descendants of Portuguese immigrants from the African islands, — and five or six families of pure Caribs who speak the Creole English of the island.

Barbadoes is the most eastern of all the Antilles. It supports a population of 182,000 on the 166 square miles of its limestone surface, or over 1096 persons to the square mile. There are no elevations above 1145 feet. The climate is healthful, and the yearly rainfall is 57 inches; though swept by frequent hurricanes, Barbadoes is the best cultivated of all the Antilles. Among the 182,000 islanders there are more than 44,000 Mulattoes and 15,000 or 16,000 Whites. The latter element remains stationary, or is diminishing even, while the Blacks and Mulattoes are steadily increasing, in spite of a very active emigration toward the other Antilles and toward British Guiana. The principal town, Bridgetown, is a city of 25,000 souls.

Grenada (including the Grenadines, a small archipelago of 33 square miles and 7000 inhabitants) has a population of 50,393 inhabitants, 6000 (?) of whom are Whites, and an area of 170 square miles. The island is somewhat unhealthful, but very beautiful; with an annual rainfall of 72 inches, neither springs nor torrents are wanting. Morne Michel, Morne Rouge (8750 feet), the culminating peak, and other names of mountains and rivers remind us that the French once colonized Grenada. Creole French is spoken on the island.

Tobago embraces 114 square miles. It is one of the most healthful of the West Indies. It has no mountain higher than 1906 feet. The inhabitants number 20,600, of whom not more than one in every 128 is a White.

Saint Lucia, Saint Vincent, Barbadoes, Grenada and the Grenadines and Tobago, together, constitute the Windward Islands — 833 square miles, with about 357,000 souls. Tobago was annexed politically to Trinidad in 1889.

Trinidad, the most southerly and one of the most considerable of the Lesser Antilles, lies near the 10th parallel of latitude. The character of its rocks and its proximity to the American continent make it a natural dependency of Venezuela — a South American island rather than one of the Antilles. It comprises not less than 1755 square miles, but only a twentieth of the surface is under cultivation; the rest is in dense woods, savannas, swamps, or mountains. These mountains, the principal peak of which, Tucutché, has an elevation of 3005 feet, are in reality a continuation of the Andes. The climate, though very hot, is not deadly except in the marshy regions, and hurricanes are rare. Trinidad was peopled toward the close of the eighteenth century by emigrants from Dominica, Saint Lucia, and Grenada (French islands ceded to England), and also by people from Saint Domingue, Martinique, and Guadeloupe, so that the prevailing language is Creole French. Out of 196,000 inhabitants, there are only a few thousand pure Whites; these are principally Portuguese from Madeira. — The chief town, Port of Spain (pop. 32,000), was called Porto de España as long as the Castilian domination lasted, that is, until 1797. Trinidad ceased to be Spanish only to become English; no other power has ever ruled in the island.

The Bahamas. — Beside her dependencies in the Antilles, England possesses in the West Indies the Bahamas, which rise out of a dangerous sea, north of Cuba and south-east of Florida. This group of 700 coral islands and 2400 reefs has been augmented by new formations even during recent years. It is 800 miles long, and stretches between the 21st and 27th parallels of latitude, in water 10,000 to 13,000 feet deep. Including the Caicos and Turk's Islands, the area is 5790 square miles. The islands are low, often rising but little above high tide, and they are very dry, for the water sinks into the coral, limestone, and sand. With all their dependencies, the Bahamas contain only 54,000 inhabitants; 6000 of these are Whites, the rest are Negroes. One of these islands — which cannot now be determined — was the first American land seen by Columbus. The principal town, Nassau (pop. 5,000), is on the island of New Providence.

The Bermudas. — The Bermudas lie about 580 miles from Cape Hatteras and 750 from the Bahamas, in the open Atlantic; the living, life-giving sea out of which they rise is 12,000 feet deep. This coral archipelago of 150 low islets is destitute of wells or springs, and its inhabitants are dependent for water on what can be stored in cisterns from the rains; but the climate is delightful. The inhabitants number 6000

to 6500 Whites, and 9000 to 10,000 Blacks—in all, 16,000 men on 20 square miles. The English have an arsenal and dock-yards here. There is an establishment for convicts on Boaz Island. The capital, a mere village, is called Hamilton.

The Bermudas, Bahamas, Lesser Antilles, and Jamaica add 1,373,000 inhabitants and 13,320 square miles to the vast possessions of the British Empire.

THE DUTCH ANTILLES.

The Dutch dependencies in the Antilles comprise a total of 437 square miles, with 46,000 inhabitants.

Curacao, containing 212 square miles, with a population of 25,900, lies at a long distance from all the other Antilles except Aruba and Buen-Ayre; the last two are



SAINT THOMAS.

likewise Dutch possessions. Curacao is near the 12th parallel of latitude, only 47 miles away from the western coast of Venezuela. It is dry and sterile, and destitute of mountains, the highest point being 1197 feet above sea-level. The language of the island is not so much Dutch as a *patois* derived from the Dutch, Spanish, Portuguese (imported by Jews), French, and Goajira Indian. The principal town is Willemstad.

Buen-Ayre, east of Curacao, is also very near South America. It consists of uplands which are not wholly destitute of forests; the population is 4700 on an area of 130 square miles.

Aruba, or **Oruba**, is a mountainous island lying west of Curacao, still nearer to the mainland than the latter; it contributes 7400 men and 64 square miles to the Dutch possessions in the Antilles.

Though Curacao, Buen-Ayre, and Aruba are under the 12th parallel, at the extreme south of the Caribbean Sea, the other three Dutch islands break the sea near the 18th parallel, east-south-east from Porto Rico, among the British Lesser Antilles.

Saba is an enormous limestone tower of 5 square miles, inaccessible, except at one point on the southern shore; here there is an arm of the sea, from which a zigzag path climbs the rock. Its 2500 inhabitants are engaged in building boats and knitting stockings.

Saint Eustache has an area of 8 square miles; the 1563 inhabitants never hear the gurgling of a brook and never taste a drop of spring water.

Saint Martin has an area of 39 square miles, 18 of which are Dutch, with a population of 4400; the other 21 square miles belong to France.

THE DANISH ANTILLES.

The Danish possessions in the Antilles are even smaller than the Dutch, for they comprise only 118 square miles and 34,000 inhabitants. These islands are three in number. They lie east of Porto Rico, near the 18th parallel.

Santa Cruz (74 sq. m.) contains 19,000 inhabitants, who speak English, not Danish. — Saint Thomas (23 sq. m.), also English in the speech of its 14,000 inhabitants, has a harbor where multitudes of steamboats put in. — Saint John, an unhealthy tract of 21 square miles, is occupied by 950 islanders.

Passing from these tropical Cyclades, with their shapely woods and tempestuous skies, to the continent cradled by the most southern waves of this same sea, we seem not to have quitted the Antilles. On the mainland are the same Blacks and planters; here, too, we find a luxuriant, graceful vegetation, mild airs, lands from which malaria rises, and heavens from which languor descends; and we hear also a Dutch jargon, Negro English, Creole French, and the prevailing idiom of the West Indies—the sonorous and balanced tongue of the Conquistadores.





THE WHARVES AT COLON.

SOUTH AMERICA.

THE REPUBLIC OF COLOMBIA.

The Colombia of Bolivar.— It was not until after 14 years of heroic fighting under the leadership of Simon Bolivar that independence from Spanish rule was assured to South America, by the victory of Ayacucho, December 9, 1824. But the bold and brilliant campaign of 1819 had resulted in the liberation of all the north-western portion of the country, that is, of the section hitherto comprised in the viceroyalty of New Granada. Availing himself of the favorable moment, the Liberator secured the enactment of legislation in accordance with which a great state was formed out of the newly freed region. This state was called Colombia, in honor of Columbus. The people comprising it were of different races, although all spoke the same civilized tongue and professed the same Catholic religion; the surface was exceedingly varied, consisting here of very low plains and there of very high plateaus; it was without roads and almost pathless, and it was due to this last fact that the patriots had been able to shake off the Spanish yoke. Such a structure, however, was necessarily doomed from the first. It lasted from 1821 to 1829; then it fell to be raised again later in the three fragments of New Granada, Venezuela, and Ecuador.

The Republic of Colombia.— Gonzalez Ximenes de Quesada, an Andalusian, had been one of the conquerors of this region of the Andes, with Heredia and Belalcazar. On his arrival in the high plain of Bogotá, the Conquistador and his Andalusian followers found this old drained lake very like the splendid Granadan valley watered by

the Genil and the Darro, at the base of the Sierra Nevada. He called it, therefore, Nueva Granada, or New Granada. The official name of the country has recently been *Estados Unidos de Colombia*,¹ or United States of Colombia. It embraces 464,537 square miles,² or, including the territories disputed with Venezuela, Brazil, Peru, and Ecuador, fully 490,000, or possibly more than 500,000 square miles. The inhabitants number more than 3½ million, nearly all of whom are scattered over about a third of the country, along its three cordilleras. Colombia has seen fit to occupy one section of the disputed territory, namely, that watered by the Rio Putumayo, a large tributary of the Amazon. Anticipating the Peruvians, the Colombians took possession of this flat region in 1875, and Peru, bereft of her strength and her glory by Chili, will not contest it with them.

The Isthmus of Panama. — The Isthmus of Panama not only separates two seas, but sharply divides the two halves of the New World, which it nevertheless connects. It is like a break, or, at least, a very low pass, between South America and Central America, the terminal bastion of North America. The inter-oceanic railroad from Colon to Panama, 47½ miles long, takes advantage of this depression. The highest grade on the road is not more than 275 feet above the ocean. Constant repairs are made necessary by the destruction caused by powerful rains, by insects, and, above all, by the persistent growth of the woods. Untiring vigilance has to be exercised to prevent a new tropical forest from covering the road and the very stations themselves; a few years of neglect would give everything over to wild nature. This iron way between two oceans starts from a small town and terminates with a ruined city. The lifeless city is Panama, whose powerful walls are now besieged by the advance guard of the forest; it has 35,000 inhabitants, the greater part of whom are Negroes and Mulattoes. The small town where the road begins has two names: the "Saxons" call it Aspinwall, the "Latins" Colon. Aspinwall is so named from a banker who was one of the principal shareholders in the Panama Railway Company; Colon is the Spanish form of the name Columbus. The navigator who made the greatest additions to the map of the world is honored here with a statue; it is erected on a square which is surrounded by Negro cabins, and exposed to the wind from the swamps. The atmosphere of Colon is heavy and malarial. If anything can make one forget the fevers of the little town or the desolation of the fallen city, it is the beauty of the valleys of the Isthmus; the train rumbles and whistles through the virgin woods; it makes the bridges vibrate over rios polluted by sleepy alligators; it brushes lithe tree-trunks, gleaming branches, arches of foliage enlivened by the songs of birds, and climbing vines which form the rope, trapeze, rings, and swing of grinning monkeys born with a passion for gymnastics.

¹ The coast of Colombia was one of the first regions of the New World to be visited by the Spaniards. Columbus himself landed here on his last voyage, in 1502. By the middle of the 16th century, Spanish rule had been established over all the north-west of South America. The colony was erected into a presidency called New Granada. In 1718 it was raised to the rank of a viceroyalty; but, as the maintenance of this new dignity proved too great a burden on the colonists, in 1719 it was reduced to a presidency again. In 1740 the colony became a viceroyalty once more. When Bolivar succeeded in establishing a republic here, the new state assumed the name of the Republic of Colombia. In 1831 the Republic of New Granada was formed out of one of the three fragments of the Colombia of Bolivar. This title was retained down to 1861, when, after a year of civil warfare, the present federal constitution was adopted (1863), and "United States of Colombia" became the official designation of the country. An unsuccessful attempt was made at the same time to restore the union of the three republics of the old federation. The constitution of 1863 was amended in 1885, and the country is at present styled *La Republica de Colombia*. — *En*.

² This estimate is from statistics obtained by Supan and Wagner for their latest tables (1891). — *Ed*.

The little town and the city, the former on the Atlantic, the latter on the Pacific, are the termini of the great inter-oceanic Panama ship-canal which, if completed, will cut the isthmus from shore to shore, at sea-level. A French company under the superintendence of M. de Lesseps was formed in 1881 for the construction of the canal, but it was compelled to go into liquidation and suspend payment and all operations in March, 1889. Though the Isthmus of Panama in reality constitutes a part of Central America, it is joined politically to Colombia, the only country in South America washed at the same time by the Pacific (on which it has 1485 miles of coast-line) and by the Atlantic (where it has a front of 1400 miles).

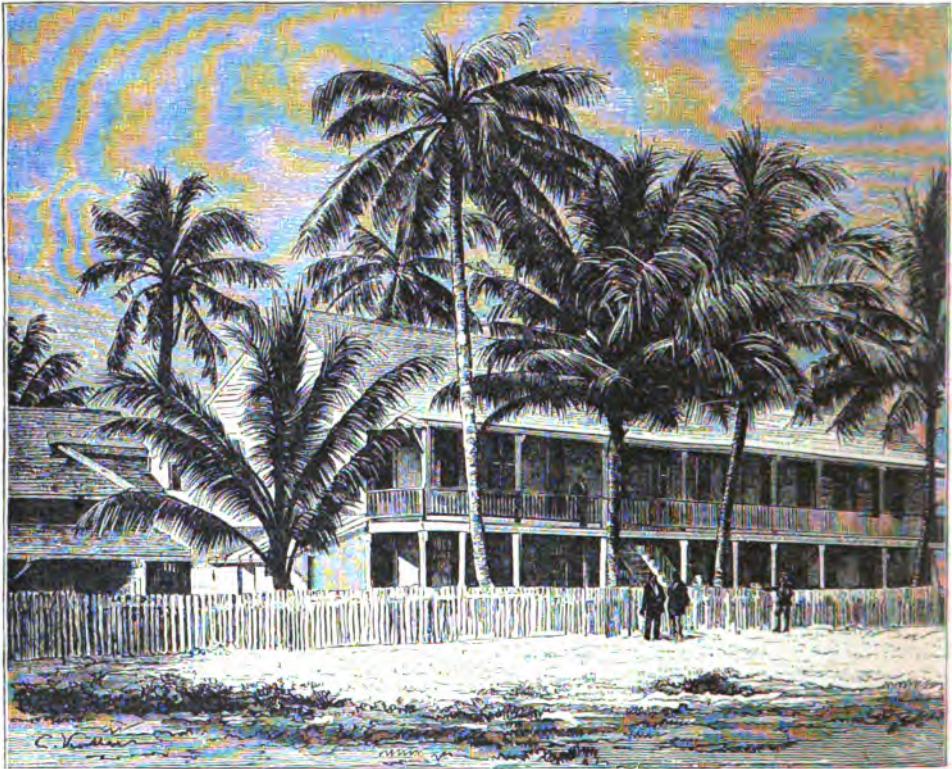
Three Physical Regions. — Three Cordilleras. — The Sierra Nevada of Santa Marta. — The surface of Colombia is distributed in three physical regions, in addition to the division into Hot Lands, Temperate Lands, and Cold Lands common to all Andean countries. These are: the Andean region, comprising the mountains and high plateaus of the centre, and embracing the Cold and Temperate Lands of the state and those valleys of perpetual spring which do not devour the European as they do the nightingale of the tropics; the narrow margin of Hot Lands along the Pacific in the west; the Llanos or plains of the east, another Hot Land, at the eastern base of the Andes, on long and broad affluents of the Amazon and the Orinoco.

When the Andes enter Colombian territory, on the south, they are divided into two chains; they bristle with very lofty volcanoes, the highest of which are Cumbal (16,044 feet), Chiles (15,880 feet), and Azufral (13,100 feet), or the Sulphur Mountain of Tuquerres; with the Cerro de Pasto, which reaches an elevation of 15,092 feet, these form the mountains of Tuquerres, or mountains of Pasto. Very soon in the place of two chains we have three, trending north-north-east. The Cordillera of the Pacific rises on the west between the Pacific and the deep valley of the Cauca, an affluent of the Magdalena; this range, the lowest of the three, has a mean altitude of not more than 8200 feet, with peaks between 10,000 and 11,150 feet. The Central Cordillera, or the Cordillera of the Volcanoes, separates the valley of the Cauca from the valley of the Magdalena. This chain has peaks higher than those of the Alps, and it even rivals the Caucasus — at least in altitude; it rears such summits as Puracé (16,103 feet) — which was lowered by its last eruption (1849) by about 850 feet — Huila (18,700 feet) with three snowy summits, the Nevado de Quindiu (16,897 feet), the volcano of Tolima (18,425 feet), Ruiz (17,389 feet), and the Mesa de Herveo (18,340 feet). The Eastern Cordillera, between the Magdalena and the Llanos, is sometimes called the Montes de la Suma Paz, or Mountains of Eternal Peace, from one of its principal peaks, the Nevado de Suma Paz, which has the same height as Mont Blanc (15,781 feet). It is in this range that we find the culminating peak of all these Andes, at an elevation of 19,633 feet, in the sierra of Cocui or Chita, which sparkles with ice and snow-masses. Seven out of the twelve volcanoes in Colombia, namely, Chiles, Cumbal, Azufral, Pasto, Puracé, Huila, and Tolima, sometimes rouse themselves even now from their long sleep.

The Sierra Nevada of Santa Marta borders the Caribbean Sea in places and is completely isolated from the Andean chains by a semi-belt of alluvia. It is supported on a pedestal of less than 4000 square miles, and yet its icy needles reach an elevation of 17,400 feet. So majestic is the aspect of these mountains that they were formerly thought to reach elevations of 20,000, 23,000, and even 26,000 feet. No other *massif* on the globe towers to such heights from so small a socle, and no other presents as imposing an appearance as does this when viewed from below.

Rios: the Magdalena, the Atrato, and the Rivers of the Llanos.—The winds from the Atlantic bring copious rains to the Colombian cordilleras, and in certain sierras near the sea, in Choco, for example, the rainfall is nearly as great as on the eastern Himalayas themselves; at Buenaventura it rains eleven months out of the twelve (?). From thirteen to sixteen feet of water falls annually on the river Atrato, 100 inches on the Atlantic coast, and Bogota is excessively humid although it is shut off from the chief sources of the rain by very high mountains.

Colombia therefore abounds in great rios. The Magdalena, its main artery, is about 1100 miles long, and carries an average of nearly 265,000 cubic feet per second,



WASHINGTON HOTEL AT COLON.

the tribute of a basin of 100,000 square miles. It is navigable for over 600 miles, starting from the *raudales* or rapids of Honda, about 60 miles from the capital—but Honda is only 690 feet above the sea and the Colombian metropolis is situated at an elevation of 8635. As soon as the stream has descended from these lofty altitudes, its valley—hemmed in by giant mountains—becomes terribly torrid, stifling, and unhealthful; the unhealthfulness is due less to the atrocious heat than to the poison exhaled from the stagnant, extravasated waters. This valley is the true home of the Negroes; they thrive here, while the white and Indian cross-breeds pine and languish. The Cauca is nearly as large as the Magdalena at their confluence, and its valley is loftier and less deadly to Europeans than that of the latter stream. The

Atrato flows through a country so beaten by rains that it carries 170,000 (?) cubic feet of water per second; it empties into the Gulf of Darien, which is surrounded by pestilential shores.

The Llanos, which are very level, as the name indicates, stretch away, on the east, from savanna to savanna, and from grove to grove, along endless rios; all these waters are torrents in the mountain, but in the plain they become enormous rivers which are converted into moving seas during the rainy season. Such are: the Putumayo, the Caqueta, and the Uaupes, which flow into the Amazon or the Rio Negro, and the Guaviare and the Meta, which belong to the Orinoco basin. Inhabitants are almost wholly wanting along these solemn streams. It is the kingdom of vacancy behind an enchanting foreground.

The Colombians or Granadans.—Aside from the Llanos, Colombia consists mainly of Temperate and Cold Lands, and the climate of the highlands is in no way unsuited to families of European stock. The hundreds of thousands of men who flee yearly from the old countries would find it difficult to discover among the new nations a more favored, more attractive, or more healthful abode; but the people weary of Europe and those who cross the ocean because others have traversed it before them have not yet found the routes to the Colombian Plateau. These routes are, moreover, terribly difficult, where, along the steep and in some places prodigiously lofty flanks of the Cordilleras, one descends from their páramos or from their nevados into the chasm-like valleys, or ascends from these abysses to the plateaus, and from these plateaus to the snows of their sierras.

Colombia has no unity, and perhaps never will have any. How could the man of Bogota, the man of lofty Boyacá or of Santander, in climates where the annual mean is 50°, 53°, 55°, 58°, or 60° F., ever resemble the scattered Llaneros dwelling under the suns of the eastern plain? Will the mountaineer of Antioquia, peacefully clearing his land, ever become like his turbulent neighbor, the Negro of Cauca, or like the inhabitant of the torrid and miasmatic regions of Bolivar and Magdalena, where the yearly mean is 80.6° F. of stifling heat?

Even within the narrow limits of many of the "sovereign" states which constitute Colombia, great and essential differences sometimes exist, owing to dissimilarities in locality, elevation, climate, origin, and the currents and counter-currents of history. In Cauca, the Pastuzo¹ is closely related to the more or less pure Quichua of Ecuador, his neighbor on the south, while the Popayanejo,² who has a great deal of Castilian blood in his veins, is not allied to the Pastuzo, and is still farther removed from the Negro of the lower Cauca. It is to the very prolific Antioqueños, who live along the banks of the Cauca, on the Cordillera of the Pacific and the Cordillera of the Volcanoes, that the greatest future is promised in Colombia. Among their ancestors there were many Jews and, it is said, some Moors; they possess a taste for work, the instinct of economy, and perseverance, and their patriarchal families of 12, 15, or 18 children reverently recognize the authority of father or grandfather.

Of the 3½ million Colombians,³ 220,000 *Indios bravos* (wild Indians) and 200,000 pure-blooded, peaceable Indians constitute the sole remnant of the numerous Redskins whom the Conquistadores found here on the plateaus and in the valleys and *quebradas*. The untamed Indians owe their freedom in mountain, forest, and fen to these very fens, to these mountains, to these effervescing forests (where it is so diffi-

¹ Inhabitant of Pasto.

² Inhabitant of Popayan.

³ See page 697.

cult to trace a *trocha*¹), and also to the malaria which rises from the soil and floats in the air over many extensive tracts—in Choco, Chiriqui, and Darien; and again, east of the eastern mountains, along the Meta, the vastness of the Llano of Casanare secures them against the inroads of civilization; lastly, in the peninsula of the Goajiros, which extends into the Atlantic at the foot of the Sierra Nevada of Santa Marta, and in which we should expect to find nature prodigal of springs, the absence of drinking-water protects the *Indios bravos* from any invasion of their wild liberty. These 420,000 Indians belong to the various races which were thinned out one after another by the Spaniards. Some, as the Panches, the Paeces, and the Andaquies of the south, the Guanes of Socorro, and the Agatas, the Tunebos, and the Laches of the Sierra Nevada of Cocui—all hardy tribes commanded by valiant men—defended themselves to the last; the others submitted without a struggle, or soon lost hope, and their end was speedy. The most civilized and important of all were the Chibchas, or Muiscas, who occupied about 5800 square miles of the high plains of Cundinamarca and Boyacá: their pontiff officiated at Sogamoso. Through their own exertions (at least, no one knows that they had instructors), they had already acquired some culture when the Christian *routiers* arrived, nearly all of whom were from Castile or from the Andalusian cities of Seville and Granada; the Muiscas had not, however, given evidence of their natural genius by great monuments, as had the Aztecs of Mexico and the Mayas of Central America; nor, like the Quichuas of Peru, by vast conquests over a multitude of peoples who were first trodden down and then organized and assimilated in Roman fashion. The Spaniards exterminated the Chibchas, or allied them to themselves by numerous unions; the children born from these alliances spoke Castilian and were Roman Catholics. These cross-breed families, which constitute the corner-stone of the Colombian people, certainly have more Indian than Spanish blood in their veins, but they have wholly forgotten their Indian ancestry, and there are few Colombians who do not boast of their Andalusian or Castilian origin. And yet how many of them are in the main descendants of the humble race which was beginning to leave its impress on the high plateaus of Cundinamarca when the Spaniards appeared there!

The pure or slightly mixed Whites, inhabiting chiefly Cundinamarca and Santander, are rated at 500,000 or 600,000, and the same number is set down for the totality of pure Negroes (estimated at 100,000 or 120,000), Mulattoes, and Zambos, most of whom are in Magdalena, Bolivar, and northern Cauca. The rest of the population is composed of 2 million Indians crossed with Spaniards in every degree imaginable, and constituting the predominant element in the six States of Cundinamarca, Boyacá, Santander, Panama, Antioquia, and Tolima. There is no immigration to Colombia except from time to time an individual, a family, or a small band of friends; the nation is nevertheless increasing rapidly, owing to an extraordinary prolificness, especially among the Antioqueños. In 1810 it numbered a million, or perhaps not more than 800,000. It doubles every thirty or thirty-five years; this extraordinary growth is confined, however, to the healthful upper and middle regions, where certain districts of Boyacá and Santander are as densely peopled as many of the *partidos* of Castile and other sections of central Spain. On the coast, and along the lower Magdalena and the lower Cauca, there is little if any growth: loathsome diseases, such as elephantiasis and leprosy, prevail here among the Negroes. In the Llanos the inhabitants are visited by two scourges, measles and small-pox.

¹ Path cut through thickets and underbrush, by means of a long knife, called a *machete*.

All the Colombians profess the Roman Catholic religion, and, with the exception of a few savage tribes, all speak Spanish.

This federation of nine sovereign States, with a federal district enclosing the capitol of the nation, convenes its parliament at Bogota, or Santa Fé de Bogota, a



A NATIVE OF SANTA MARTA.

city of 100,000 souls, the "Hispano-American Athens." The city is regularly laid out; it was founded by Quesada in 1538. The climate is very equable, the mean of the coldest month (57.2° F.) nearly equalling that of the warmest (60.8°). The town is built on a savanna occupying the bed of a drained lake, at an altitude of 8635 feet.

and dominated by Montserrato and the Guadalupe. Its rios flow toward a tributary of the Magdalena, the Funza or Bogota, which descends from the cold lands to the temperate by the sublime cataract of Tequendama, over a rock 479 feet high.¹ The falls in the Guadalupe (a sub-affluent of the Cauca through the Porce), in the State of Antioquia, are said to be grander still; they are certainly much higher (820 feet).

VENEZUELA.

Venezuelan Sierras. — The Spanish word Venezuela signifies Little Venice. The entire country — sierras and llanos — has adopted the name bestowed by the discoverer of this region, Ojeda (who was accompanied by Amerigo Vespucci), upon a few Indian cabins raised on piles along the banks of the passage leading to Lake Maracaybo, — a “village of the waters,” like Venice, the queen of the Adriatic.

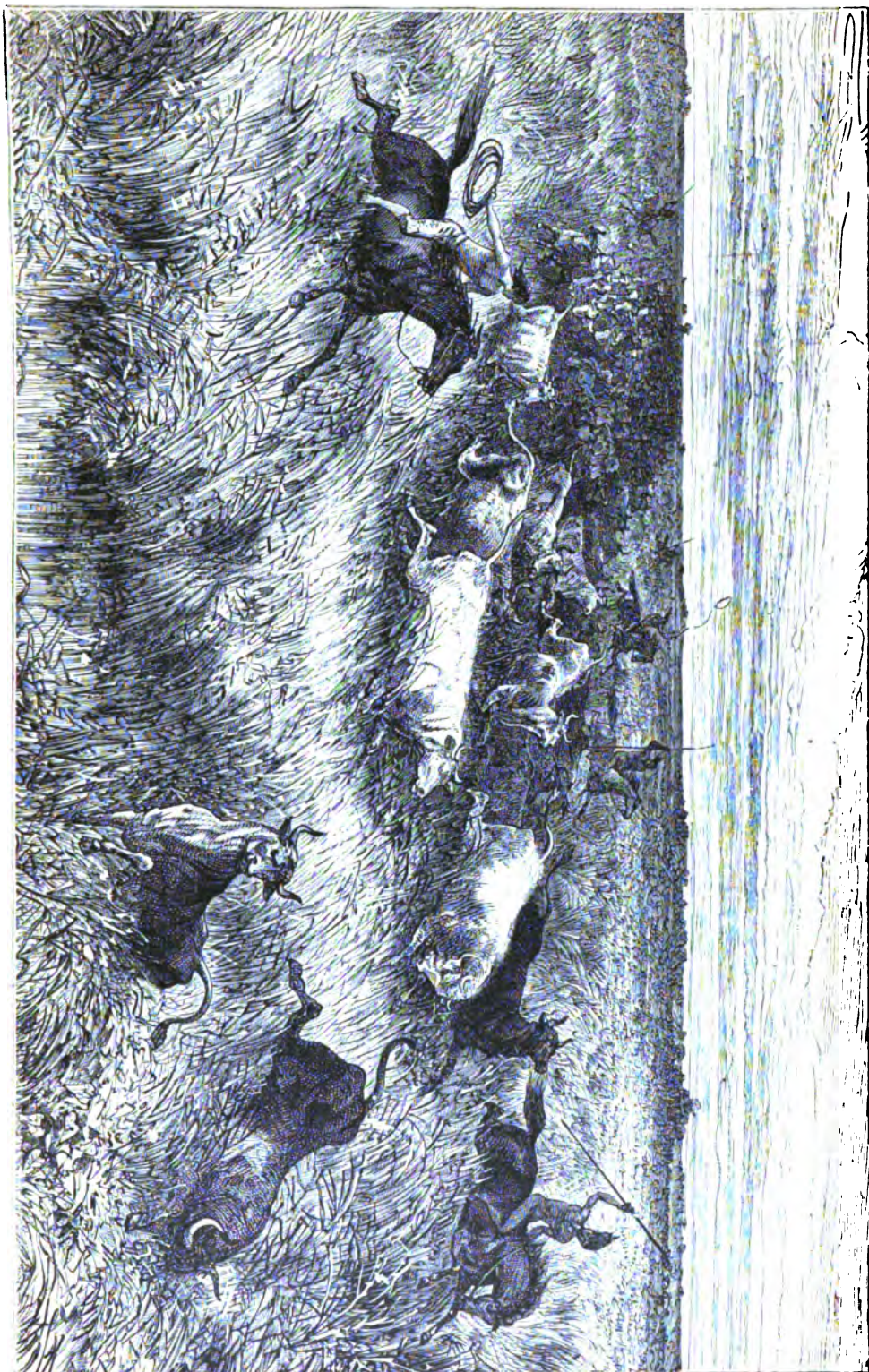
Following the Antilles from Cuba, we reach Trinidad, a mountainous island formed by the prolongation into the sea of the sierras of the mainland. Trinidad is separated from the South American continent by the Strait of the Dragon's Mouth, and from the broad delta of a mighty stream by a passage called Serpent's Channel. These mountains constitute the principal Cold Land of Venezuela, and the broad delta lies at the terminus of the Orinoco, a river into which are poured the currents of the most extensive Hot Lands of the State, as well as various rios rising in the Temperate Lands of the mountains of Guiana.

This favored country, comprising about 430,000 square miles — not including the plains claimed by Colombia — embraces, from north to south, a Hot Land on the strand, a Temperate Land in the maritime sierra, a vast Hot Land called the Llanos, and, lastly, Temperate Lands in the elevated portion of Venezuelan Guiana. The first hot district borders the Caribbean Sea, under the 10th parallel north latitude; the torrid heat of the tropics is augmented by the reflection from the coastal mountains and the motionlessness of the air. So far, only a few towns have been built here, and these are small and stifling. Such are: Maracaybo, which has replaced the Little Venice of Ojeda, on the channel leading from the sea to Lake Maracaybo; Puerto Cabello, the port of Valencia and of the valley of Aragua, which has been sur-named the Garden of America; La Guayra, the port of Carácas; and “trembling” Cumaná,² the home of the Liberator Bolívar. In the cool season, the temperature of this last seaport never sinks below 75° F., and the yearly mean fluctuates between 80° and 86°. But this hot zone is of insignificant extent, for it is closely pressed upon by the cordillera; in places, mountains with frightful declivities spring out of the very waves, and temperate valleys are always sheltered in the flanks of these *massifs*: Carácas is situated in such a valley. The Cerro de Avila, between the capital and the Caribbean Sea, culminates in the very beautiful Silla de Carácas (8743 feet), visible from the metropolis, and the Aiguille of Naiguatá, not in sight of Carácas.

The littoral chain of Venezuela is a part of the great cordillera which bears the principal Cold Lands of the country, and the cordillera is itself a prolongation in a north-easterly direction of the most eastern of the three long Colombian sierras. The culminating summit of the State, so far as known, is the Nevado de Merida, a giant

¹ Or perhaps not over 456. ² Twice levelled by an earthquake, once in 1766 and again in 1853.

A HERD OF CATTLE IN THE LLANOS.



which reaches an altitude of 15,026 feet ; it rises in the lofty sierra of Merida, between the low shores of the vast marine lagoon called Lake Maracaybo and the undefined Llanos of Venezuela and New Granada. Although very near the 8th parallel of latitude, this peak is snow-capped for months every year.

The Llanos. — From the cordillera of Merida we descend by rigid declivities to the low plains of the Orinoco, which — under the name of the Llanos — cover from 300,000 to 310,000 square miles of Venezuela and Colombia. Their surface is as level as a lake, except that at long intervals there are *mesas*,¹ or eminences which were islands in the sea that once occupied these steppes, and *bancos*, — sandstone or limestone ridges which in ancient times were reefs beaten by the same billows that encircled the mesas. No trees are seen during long days of travel, except here and there a



ON THE LLANOS.

palm : we should say rather *few* trees, for the Llanos are gradually becoming wooded again, except in the campos of Apure. During the rainy season the rios overflow and cover the plains far and wide with a turbid sea. The mesas emerge from the waters forming a refuge for the jaguar, and for the cattle, horses, and mules, which are then no longer guarded by the mounted Llanero ; the bancos entirely disappear in the freshets, for they are scarcely more than 3 to 6 feet high. When the waters recede, the rich soil in the Llanos is soon clothed with savory pasturage. But the sun which gleams on the fermenting mould gives life also to many noxious plants and many venomous animals. The Llanos produce sharp-edged leaves, poisonous shrubs and fruits, clouds of mosquitoes, deadly reptiles, electric fish, spiny skates, water-serpents capable of strangling the most powerful bull in their folds, alligators, and a species of blood-thirsty fish called *caribes*. Fevers, more to be dreaded than serpent, alligator, or

¹ Tables.

jaguar, are bred every year in the *esteros*, or marshes, which the inundations of the rios untiringly fill, and which the sun as untiringly drains. It is fever that lays most of the Llaneros under this glowing sod.

The Guaviare, the Meta, and the Apure, three broad affluents of the Orinoco, flow through the Llanos.

The Orinoco.—The Orinoco rises in the Sierra Parime. Its sources, which M. Chaffanjon has just reached, lie 3000 or 4000 feet above sea-level. On reaching the



A WATER-SNAKE.

plain, at the foot of Mount Duida, at an elevation of 1475 feet, the stream divides into two arms; one, the Cassiquiare, with a breadth of 1300 feet and a depth of about 30, joins the Rio Negro,¹ an enormous tributary of the Amazon; the other remains the Orinoco. The Orinoco enters the lowlands by the rapids of Maypures and Atures: these are thundering cataracts, though formed by only a slight descent in the level.

¹ The explorations made during a recent survey (1880-83) of the boundary between Venezuela and Brazil revealed the fact that the Orinoco and Rio Negro are not connected by the Cassiquiare alone, but that a great number of bifurcations exist forming a large island, which has been named *Ilha Pedro II.* — Ed.

In the plain, the river winds between llanos on the left and forests on the right, impeded in its flow by shallows, tongues of mud, alluvial islands, and reed-jungles swarming with alligators and turtles. The clayey, whitish floods, swollen by the milky waters of numerous branches, would be even whiter than they are if it were not for the black streams (transparent, however, to a depth of 15, 20, or 30 feet) which are poured into them. The courses of these currents of such dissimilar hues are strangely entangled with one another. At Angostura, or Ciudad Bolívar, the breadth of the Orinoco exceeds 16,000 feet, and yet the Spanish word *angostura* designates a narrow pass. The marvellously plastic and fertile delta, covered with an unruly vegetation, begins 125 miles from the sea; it has an ocean front of 200 miles. The Orinoco offers the choice of half a score of branches to large ocean vessels, — from the Boca Vagre to the Boca de Navios; the latter, the most southern branch, is the broadest and the one best suited to navigation. The stream is about 1500 miles long, and drains a basin of 366,000 square miles; the low-water flow is 239,330 cubic feet per second, and the mean about 495,000.

Venezuelan Guiana. — Amazonas. — Toward the south, on the right bank of the Orinoco, the surface rises, — first in hills, and then in mountains which attain an elevation of 8228 feet in the Sierra Maraguaca. This region is embraced in the Guiana of Venezuela. Venezuelan Guiana is less extensive than the Brazilian, but it is larger than either the English, the Dutch, or the French, — the only South American countries not ruled by South Americans. Owing to the favorable slope of the land, it is also more healthful than the other Guianas. And yet this territory, stretching along the Orinoco for more than 600 miles, and rich in gold, is almost uninhabited; it supports less than 50,000 people on 145,000 to 150,000 square miles.

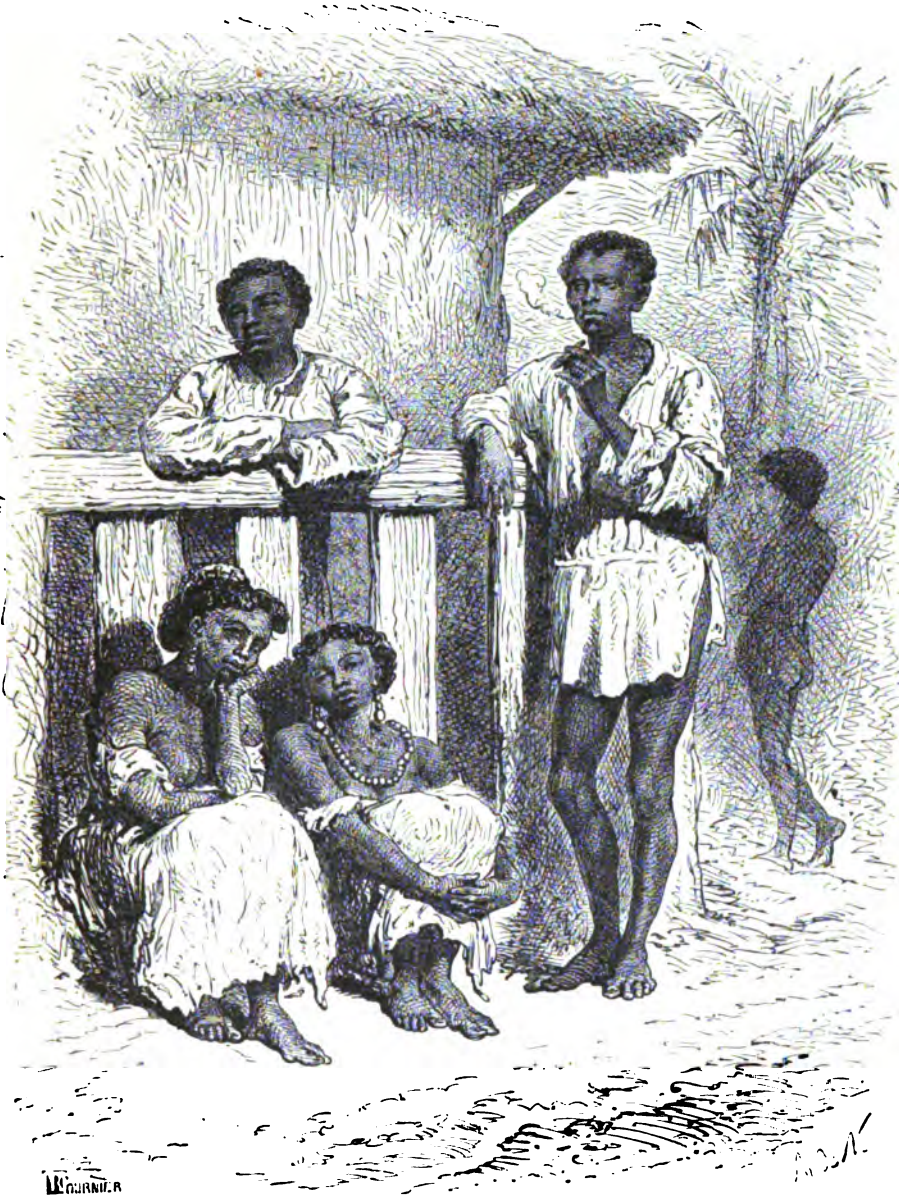
In the extreme south of Venezuela there is a district, comprising 90,000 to 95,000 square miles, which is almost as sparsely settled as Guiana itself. This tract lies along both banks of the upper Orinoco, and on the upper branches of the Rio Negro, a tributary of the Amazon — which justifies in a measure its name of Territorio de Amazonas. Amazonas and Guiana together embrace three-fifths of the surface of Venezuela.

Inhabitants. — The population of the state has no considerable density except in the coast cordillera and on the principal chain, in the regions around Carácas, Valencia, and Merida. A recent estimate places the number of inhabitants at 2,269,000,¹ 500,000 to 600,000 of whom are enrolled as Whites; but the so-called Whites of tropical America are often Indians but slightly modified by European blood. The Spanish language, which was first introduced by the Conquistadores, and afterward by the Galician, Catalan, and Andalusian traders or planters (to say nothing of the Escudunacs, who constituted a large element among the immigrants), is spoken almost everywhere, and Roman Catholicism is the prevailing religion, except among a few tribes of non-catechised Indians.

Like the other Spanish colonies, Venezuela suffered much from the greed and injustice of the mother-land: Madrid, Seville, and Cadiz filled their coffers with doubloons coined in America; in return for all this wealth they planted fortresses and built vulgar church edifices. When the Spanish conquerors had completed their work, when they had annihilated a part of the numerous Indian nations, and debased the rest, when they had learned from their victims which were the metalliferous mountains, when they had worn out multitudes of men in quest of gold and silver, and

¹ See page 697.

when there remained only two wonders undiscovered, — the Fountain of Youth and El Dorado, — Spain had a world before her to be peopled; but, instead of pouring Spanish colonists into America, she hedged her possessions about with severe laws



VENEZUELANA.

which repelled settlers. At first she utterly disregarded the rights of the Indians, and later on she failed to comprehend what possibilities the New World held out to the Castilians. She cared for only three things: to swell the treasury of the king;

to enrich officers, soldiers, and favorites; and to convert the Indians to Roman Catholicism. The captaincy-general of Carácas (corresponding in a measure to the Venezuela of our day) received, on the average, not more than one hundred settlers annually; even now only a few thousand arrive each year; these come to engage in agriculture or cattle-breeding in the exuberant regions around the rios, to carry on commerce, or to work the gold mines of Caratal—a new California in Venezuelan Guiana, in the basin of the Caroni, an affluent of the Orinoco. Until recent years, the only foreigners who contributed to the increase of the population were Canary Islanders. Fully 40,000 of these have immigrated to the state within 40 or 50 years. The Venezuelan people is nevertheless growing; it has more than doubled since 1838, when it numbered 887,000, or, according to other estimates, 1,048,000; the population in 1886 was 2,198,000.

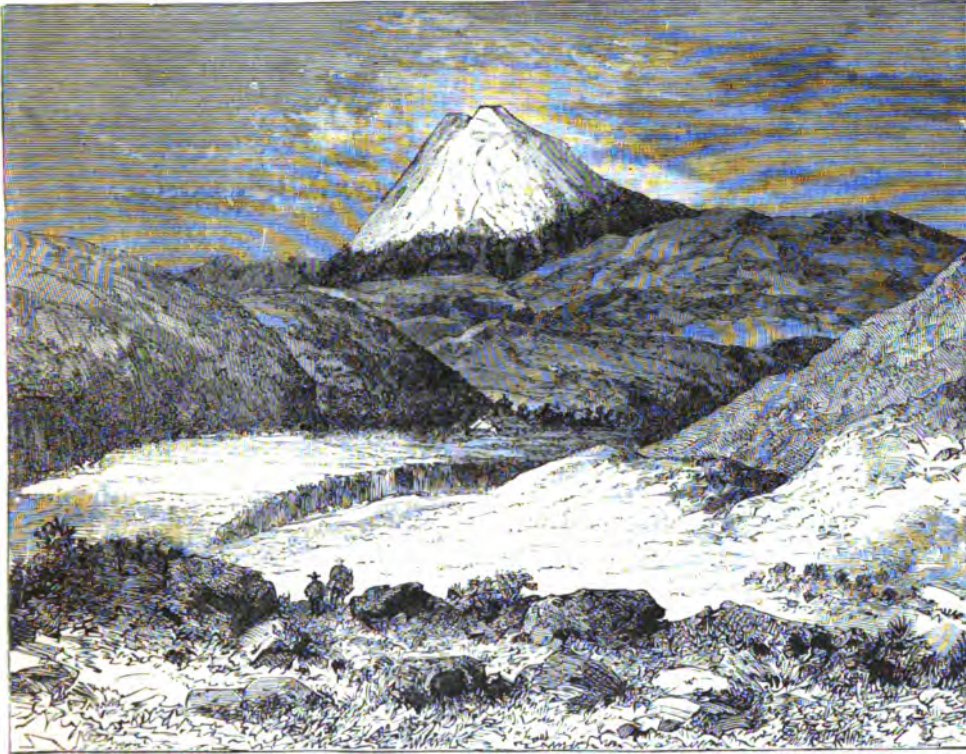
Carácas (pop. 70,000) was founded in 1567. It lies at an elevation of more than 2600 feet, 12 or 15 miles from La Guayra, a wretched port on an unhealthful coast; it has a charming, equable climate, with an annual mean of 69.8° F., a maximum of 78.8°, and a minimum of 53.6°. In 1812 Carácas was levelled by an earthquake: nine-tenths of all the houses fell; a half of the 40,000 to 50,000 inhabitants were either buried under the ruins, or fled from the city.

ECUADOR.

The Ecuadorian Andes, Lofty Volcanoes.—Ecuador is a Spanish name, signifying “equator,” and the great circle which girdles the globe midway between the two poles does in fact pass over the northern part of the country, a short distance north of the capital. Ecuador embraces 115,000, 150,000, 200,000, or even 300,000 square miles, according to the distance which we set back its eastern limits into the plain of the Amazon; the districts along the undefined eastern frontier consist of alluvial tracts as yet unturned by the ploughshare, and forests of great magnificence, which have been respected by axe and torch down to the present time, on account of their inaccessibility. This vast level expanse, very gently inclined toward the powerful Marañon, constitutes, with the Pacific coast region, the Hot Lands of the state. Between the sea and these low plains rises the double chain of the Andes, with Temperate Lands, Cool Lands, and Cold Lands—the last insignificant. The strip of land between the Pacific and the Andes is narrow and rugged, consisting of mountain swells, cañons, barrancos, and quebradas; it stretches along the shore for 530 miles, beyond the point where the cold sea current from the South Pole is deflected to the westward. Sufficient rain falls during the *invierno*, which lasts more than half the year, to feed broad and violent rivers: among others, the Esmeraldas on the north, and on the south the torrents which unite to form the Guayas or Guayaquil. Twenty volcanoes not far from the vent-holes of New Granada, but separated from the steaming caldrons of southern Peru by more than 900 miles, are at the same time Ecuador's greatest beauty and her greatest terror. Three of these monsters, Pichincha, Cotopaxi, and Sangai, are still restless; they growl and smoke and eject flames; five that are now dead or quiescent have at different times given the Whites evidence of their living power; eight have not stirred since the days of the Conquis-

tadores, and no one knows when they became extinct (if they are indeed extinct). Twelve rise in the Eastern Cordillera, eight in the Western.

Mount Chimborazo, the highest summit in Ecuador, is in the Western Cordillera, or the Cordillera of the Pacific; this mountain was long supposed to be the loftiest peak of the earth, and yet its volcanic dome reaches an elevation of only 20,702 feet, or perhaps of not more than 20,515 — that is, 6500 to 8300 feet below the Titans of the Himalayas; there are other tops as high and even higher in the Andes themselves. North of this nevado¹ rise: Carahuairazo² (16,752 feet); double-headed Iliniza (17,405



COTOPAXI.

feet); Corazon (15,705 feet), composed of naked crags; Pichincha (15,705 feet); and Cotocachi (16,293 feet). Pichincha, or Guagua Pichincha, "Boiling Mountain," is a superb volcano as well as a superb nevado; its four peaks stand out on the horizon of Quito, and its crater, measuring 2500 feet from the rim to the bottom, is believed to be the deepest on the globe.

The distance between the Eastern or Royal Cordillera³ and the Western, running parallel to it, ranges between 35 and 40 miles; the table-land supported by the two chains has an altitude of about 10,000 feet, near the centre, in the Quito country, and

¹ Chimpu-raza, the Indian name of which Chimborazo is a corruption, signifies "Mountain of Snow."

² The Indians call Carahuairazo Chimborazo's Wife. — Ed.

³ The Spaniards of the conquest named this chain the Cordillera Real, because the royal or imperial highway of the Yncas between Cuzco and Quito ran at its base.

of 7200 to 8200 in the north, on the Colombian frontier, and in the south, along the Peruvian boundary. Transverse chains subdivide this high plain into eight plateaus, all of which are either bare or covered with woods that are wholly destitute of tropical luxuriance. It is in the rainier districts lower down, within range of the Pacific winds, or of the almost constant storms which blow from the Atlantic across Brazil, that we find exuberant forests of stalwart trees.

In the Eastern Cordillera, Sangai (17,464 feet), in the extreme south, is the loftiest summit; this volcano is always in a state of eruption, spasmodically discharging lava, water, or mud, or ejecting ashes which fly as far as the Gulf of Guayaquil; since the Spanish conquest, three hundred years ago, Sangai has been in uninterrupted activity. It is perhaps the most restless volcano in the world. On its north is El-Altar (17,730 feet), which the Indians call Capac-urcu or "Chief Mountain"; according to tradition, it once surpassed Chimborazo itself, but lost its rank among the Ecuadorian peaks by a landslide which carried off its top, 14 years before the arrival of the men who were to change its pagan name of Capac-urcu to a Castilian and Christian name. Then follow among others, from south to north, forest-girt Tunguragua (16,690 feet), which discharged streams of mud in 1797; Cotopaxi (19,498 feet), "capable of hurling rocks weighing 200 tons to a distance of 9 miles,"—a magnificent truncated cone unrivalled in altitude among active volcanoes and vying in beauty and majesty with Fuji-san itself; Antisana, rising to the height of 18,852 feet; Cayambi (19,161 feet), situated exactly on the equator; and Imbabura (15,033 feet).

The Llanos of Ecuador: the Napo.—Nearly the entire Ecuadorian people is concentrated in the uplands, chiefly in the lofty plateau which is barred both on the east and west by the volcanoes, nevados, and peaks of the two cordilleras; here, at varying altitudes, the summer or autumn temperatures of temperate countries are to be found the year round. Descending toward the south-east with the rivers from the high mountains, we encounter broad tracts of waste land; the ways lead us through forests abounding in different species of cinchona. This tree of priceless value is being destroyed here with mad wastefulness. The rivers of this region reach the Marañon above or below the Pongo de Manseriche, a Peruvian cañon at the outlet of which the Marañon passes into the plain and becomes the principal river of the globe under the name of the Amazon.

All the great rios of Ecuador descend this slope of the Andes; they issue from gorges and leap down the steep declivities in furious cataracts; then, at the foot of the last fall, they grow quiet, and, broadening out, enter the virgin forest through which they flow to the Marañon. The Napo, the longest current in the state, rises in the defiles of Cotopaxi; it is navigable for canoes below the cataract of Cando. Its width varies from 1300 to 3300 feet; its tranquil and limpid waters do not wholly disappear in the turbulent and murky floods of the Amazon for several leagues below the confluence of the two streams.

The Ecuadorians: their languages, their capital.—There are perhaps 100,000 to 200,000 wild Indians in the Llanos of the east, in the region where Colombia, Peru, and Brazil dispute the possession with Ecuador. Aside from these uncivilized, untamed tribes, the census of 1885 returned 1,004,651 inhabitants,¹ nearly all of whom dwell in the zone very appropriately named *Tierra fresca*.²

The smaller half of the population is composed of about 100,000 Whites and from 300,000 to 400,000 White and Indian cross-breeds; the larger half consists of cate-

¹ See page 637.

² Cool Land.

chized or Catholicized Indians. Negroes, and Negro and White or Indian half-castes are rare. Though nearly all the aborigines of the one hundred seventeen tribes of the kingdom of Lican¹ have professed, willingly or unwillingly, belief in the Christian doctrines, though they may now be Catholics of artless faith and deep fervor, though they salute the passer-by with a pious *Alabado sea el santísimo sacramento del altar*,²



CHIMBORAZO.

they have not all renounced the old Peruvian tongue, — the Quichua of their fathers, — which Belalcazar's Spaniards heard on their arrival in Quito in 1534. Castilian prevails in the towns, but its supremacy is not complete there, and Quichua, corrupted, and mixed with Spanish words, predominates wholly in the country districts; it is nevertheless destined to disappear before the universal idiom of the Spanish Americans. For the moment, therefore, Ecuador comprises two peoples: most of the urban

¹ The name borne by the Quito country before its conquest by the Yucas about fifty years before the Spanish invasion.

² Blessed be the most holy sacrament of the altar!

population, called *la gente distinguida*, speak Spanish; but *la gente de pueblo*, the rural population — peaceable, modest, shy, submissive — have been false neither to the idiom of Cuzco nor to the memory of the glorious empire, to which, however, they scarcely belonged; and it is, we are told, as a sign of mourning for the past grandeur of the Yncas that many of the Ecuadorians wear the black *poncho*. These gentle and honest people, so mild that they give little promise of ever becoming a virile race, are gayer and have more intelligent countenances than the other Quichua Indians. They are notoriously filthy; "they will never discover gold if gold is hidden in soap." The White man takes advantage of their tameness to overreach them; they are always buried in debt, to the advantage of the townspeople, business men, politicians, and merchants. A third nation, very much scattered and broken, is that of the Indians of the east; these non-Quichuas are classed as a distinct race, called the race of Antisana.

Quito (pop. 50,000), the capital, only 14 miles from the equator, is built on rios belonging to the basin of the Esmeraldas; it lies 9350 feet above sea-level, at the foot of Pichincha. The climate is cool, with a yearly rainfall of 47 inches (in 161 days). From the terrace of the Presidential palace can be seen Chimborazo, smoking Cotopaxi, eleven snow-crowned mountains, and a valley where all the vegetation of temperate Europe thrives by the side of the sugar-cane, the cocoanut-tree, and the indigo-plant. "Live at Quito, and in heaven have a little opening through which you can gaze at Quito," the Ecuadorians say.

Some of the pueblos of Ecuador have preserved ruins of the Peruvian era, such as causeways, fortresses, tombs, temples of the Sun, and palaces of the Yncas.

The Galapagos. — The Galapagos, or Tortoise Islands,¹ rise in the Pacific about 600 miles out from the shore of Ecuador; the sea is deep here and comparatively cold, although the archipelago is situated exactly on the equator; the low temperature is due to the cold Humboldt or Peruvian Current. Of the 2950 square miles embraced in the group, 1650 belong to the island of Albemarle, which supports a peak of 5020 feet, the culminating point of the Galapagos. The islands, which are poor in vegetation, are composed of ancient and modern lavas; they contain several volcanoes not wholly extinct, and perhaps two thousand craters which are no longer active. There are now 204 inhabitants; wild herds bred from domestic animals introduced in former times, — oxen, horses, asses, swine, dogs, and goats, — roam over the islands.

PERU.

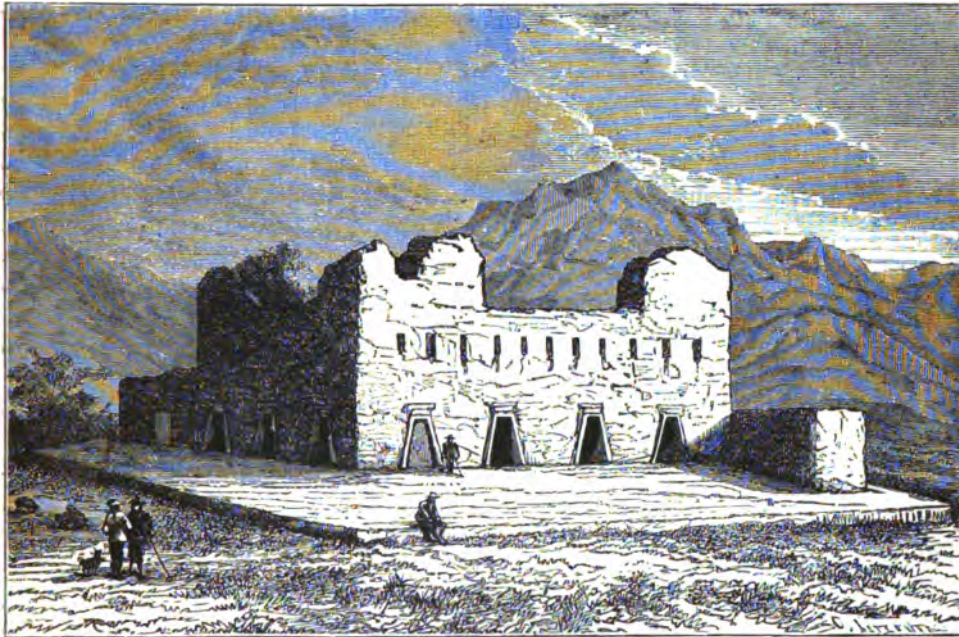
The Empire of the Yncas. — The Conquest of Peru. — The Chilians have recently come off conquerors in a relentless and desolating war against their neighbor on the north, by which they obtained the cession of her rich southern province of Tarapaca and the privilege of occupying Tacna for ten years. Poor to-day, notwithstanding her world-wide renown for wealth, Peru possesses about 464,000 square miles of territory.² This country embraced a much vaster area when it extended from the Rio

¹ Galapagos is a Spanish term meaning "tortoises."

² Before the war with Chili the area of Peru was 504,000 square miles. At present the country extends between the parallels of 3° 21' S. and 19° 10' S. and between 68° and 81° 20' 45" W. Long. The Peru-Bolivian frontier has not been accurately defined. — Ed.

Mayo, near Pasto on the Granadan and Ecuadorian frontier, as far as the Rio Maule of the Chilians: it was then called Ttahuantinsuyo, or the Four Countries of the world, and comprised Antisuyo, Cuntisuyo, Chinchasuyo, and Collasuyo, that is to say, the East, West, North, and South. It included at that period (before the arrival of the Spaniards) the regions which have since become Ecuador, Peru, Bolivia, and northern Chili.

The Quichua Indians had established on the shores of Lake Titicaca and on the plateaus of Cuzco an empire based on the precepts of a religion which had been preached in the eleventh century (according to the legend) by Manco Capac, son of



TEMPLE OF THE SUN ON THE ISLAND OF TITICACA.

the Sun. Like the Aztecs, they cultivated and irrigated the soil systematically; they reared temples glittering with gold to the Sun, their father and their god, they built palaces to their princes, they erected massive fortresses, and their four great routes, radiating from Cuzco, the heart of the empire, extended for hundreds of miles over the wildest mountain-ranges and across the bleakest deserts, rivalling the far-famed roads of old Rome. All power was vested in the emperor; but his despotism was more or less tempered by the tolerance and gentleness which the revelator had inculcated on his followers. However, to tell the truth, the numerous tribes which were subjected by the sword to the dominant people were all ruthlessly trodden under foot by their masters, and here too men were hostile brothers.

Unless all this history has been much embellished by Spanish tale-tellers, there was never a more favored empire than that which was built up and cemented together by the Yncas of Cuzco. The Peruvians of the present day, descendants largely of the ancient Quichuas, can extol their ancestors as the men who gave the mildest laws to the New World. Human blood never reddened the altars of their temples, and the

gods of these old Peruvians were neither grotesque nor blood-thirsty. But on the arrival of the Whites all happiness for the Quichuas vanished like a dream. It was in Peru especially that the Spaniard destroyed like a conqueror instead of creating like a master. From the time of the downfall of the last of the Yncas to the hour which witnessed the departure of the last soldier of the Castilian garrisons, the number of the Indians decreased much below what it was on the day when the Peruvians, dumb with surprise, saw advancing over their paved roads a small band of men headed by Francisco Pizarro, formerly a swine-herd of Estremadura. This brigand chief did not know how to read, and he commanded less than a thousand soldiers; but his soldiers were crusaders as well as freebooters. Considering their Catholic fervor, their Spanish haughtiness, their physical endurance, their zeal, and their courage, these were extraordinary men.

Before overrunning this country of gilded temples, as converters, plunderers, and executioners, Pizarro and his *malandrins* had suffered as people knew how to suffer in those times. In an early expedition, it is said, the old swine-herd had been driven to such straits that he gnawed the pump-leather of his vessel to appease his hunger; once he had been wounded and left on the ground for dead. At length, when the courage of his men was giving way, tracing a line on the sand with his sword, he cried out: "Let those who are willing and ready to go forward leap over this!" — and 16 Spaniards out of the little wasted band cleared the mark at a bound. Such constancy had its reward: Pizarro won the empire of the Yncas.

The Quichua nation still survives. If the Peruvians demanded the *aman* too soon of the bandit troop, it was because they had lost the spirit of independence generations before. Servile, out of respect for and fear of the throne, trusting in their priests, confiding in the benevolence of their heavenly father, the Sun, lulled to sleep by a communism which assured to every one his humble lot, they became cowardly and cringing as soon as they saw their king vanquished, their priests wavering, and the Sun neutral in the struggle between his people and the stranger. It is now 350 years since the Indians of the Peruvian Andes accepted the ignominious yoke, but they have not totally renounced all aspirations after liberty. They have sometimes revolted, separately or *en masse*, and doubtless more than one plot for extermination has been conceived in the darkness which has never seen the light.

The story is told that some chiefs once threw two llamas into a torrent which issues from a net-work of fountains and lakes in the Cordillera. One of the llamas was white; the other was black and represented the Indian race in the minds of the chiefs. The white llama was drowned; the leaders saw in its death a sinister omen for their oppressors, and they roused their people: but the omen had deceived them. Later, they again threw two llamas into the river. This time the black one disappeared in the current, and the conspirators, terrified by the augury, dared not appeal to immanent, eternal justice. Though they have the same longings after freedom to-day, their hope is fading. What can they accomplish against the coastmen who have command of cannon with a range of ten thousand paces, of ships moved by fire over the sacred lake of Titicaca, and of trains of cars which whistle through the bowels of the Cordilleras? The most terrible of all the Quichua revolts took place in 1780; it was headed by a descendant of the Yncas, Tupac Amaru. In a hundred days 40,000 Whites were slaughtered, and but for the re-enforcements which arrived from Buenos Ayres, Peru would have been free, for a time at least, and perhaps for-



LAKE TITICACA.

ever. In 1854 a typhus epidemic which decimated the Indians saved the Whites from a long meditated attack. Another uprising miscarried in 1860.

La Costa.—The land boundaries of Peru are Ecuador, Brazil, and Bolivia; it confronts the Pacific Ocean on the west, along a cold current coming from the south: this is the Humboldt Current, the temperature of which is here nearly 22° F. below that of the surrounding waters.

* La Costa, the rugged strip of coast included between the Pacific and the base of the mountains, is a Hot Land, burnt by the sun and so little visited by rain that twenty or thirty years sometimes fail to bring a single shower. Now, where there is no water there is no vegetation. The Valles of La Costa are destitute of cultivated fields, except along the Andean torrents and on the irrigating canals. From 1847 to 1877 not a drop of rain fell at Payta, a coast town in northern Peru, and when at last a storm did break over the tawny, pulverulent campo, it washed away the clay houses, cut torrent-beds through the streets, and caused heavy damage to the railroad leading to Piura, a city on the road to the Andes. Thunder and lightning are unknown in Payta, as well as in Lima and other cities of the coast: it is said that thunder was not heard in the Peruvian metropolis from 1805 to 1877.

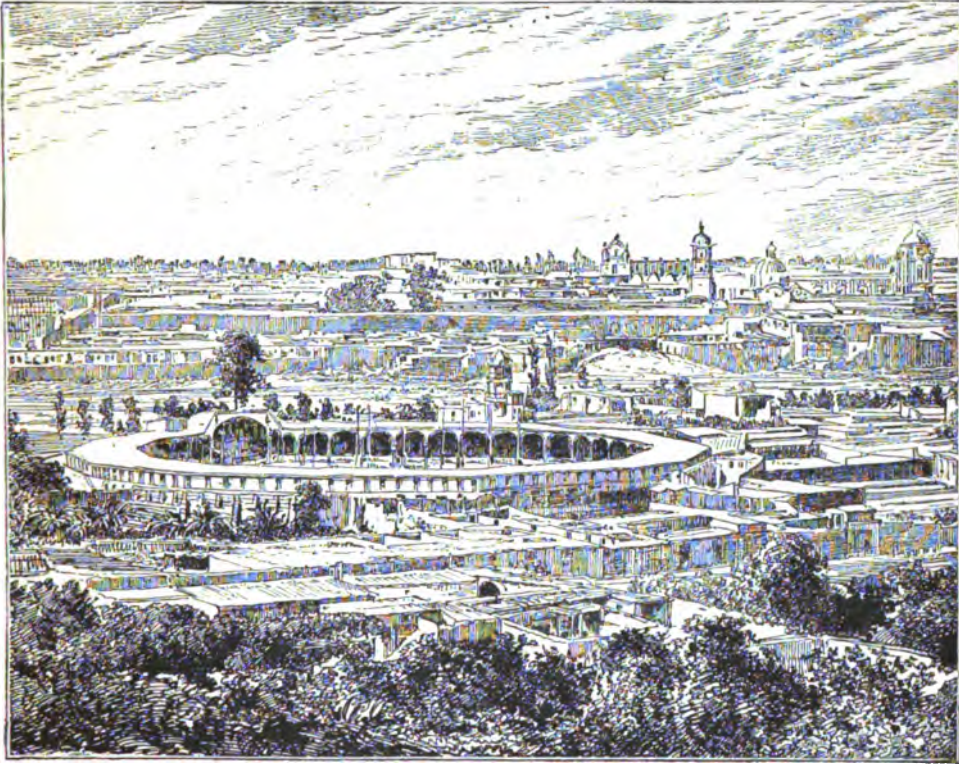
The Peruvian Andes: Lake Titicaca.—**La Montaña.**—A large number of insignificant mountain-ranges rise between the littoral and the Andes. One of these chains, in northern Peru, forms the valley of Santa, which is better watered than the others on account of a gap in the Andes through which the trade-winds pass; this valley, which was very fertile in the time of the Yncas, is to-day becoming the granary of the Limenians. Climbing the Andes, we reach the Temperate and Cold Lands, which are to make the future of Spanish America and particularly of Peru. On the slopes of the *tierras templadas* and the *tierras frias*, and on the plateaus, the white man has no fear of epidemics, anæmia, and bodily disorganization, nor of mental decadence and exhaustion of the will-power. The Peruvian Andes are *par excellence* the region of great longevity.

The Cordillera from the south divides above the sands of Atacama, a seaboard which originally belonged to Bolivia but which is now Chilean. The right chain runs off into Bolivia; the left, which is shared by Bolivia and Peru, is one of the loftiest in South America—a long, desolate, chaotic ridge, almost destitute of snow, naked and dry; here the traveller is compelled to follow the beaten paths leading up to the passes, which open, on the average, 13,000 feet above the seas. No one knows the number of the volcanoes in this chain, nor the altitude of nearly all its peaks; Lirima, which was once generously set down at 23,450 feet, has not belonged to Peru since the loss of the province of Tarapaca; the volcano of Huallatiri reaches an elevation of nearly 19,700 feet; Parinacota, composed likewise of lava and basalt, is 20,919 feet high; its neighbor Pomarape about 20,500; Tacora, or Chipicani, 19,741; Misti, or the volcano of Arequipa, 20,013; after which the sierra sinks and there are no more fiery summits until we reach Ecuadorian territory 930 miles to the north.

To whatever sublime heights these Peruvian colossi rear their heads, viewed from the lofty pedestal which supports them, they possess neither beauty, diversity, nor grandeur: many of them are dumpy and clumsy, and nearly all are dreary; yet more than one is superb. Such is Misti, the imposing pyramid which no one has yet scaled to the top, and which has been inactive for more than three hundred years; it overlooks Arequipa in its smiling oasis on the river Chili; this city, situated at an elevation of 8320 feet, is perhaps more often visited by earthquakes than any other

in the world: 826 shocks occurred between 1811 and 1845, or an average of two per month.

Between the Western Cordillera, in which Misti is situated, and the Eastern, out of which rise the principal mountains of Bolivia, namely, Illimani, Huaina Potosi, and the Nevado de Sorata,—all higher than Misti itself,—stretches a cold, bleak lowland tract of 38,000 to 42,000 square miles: this tract can be considered as lowland when compared with the Andes which bound it on the east and on the west, but the great lake into which its rios flow reflects the sunlight at an elevation which sur-



LIMA.

passes that of the loftiest peak in the Pyrenees by 1440 feet. This table-land bears the two names of Peruvian Plateau and Plateau of Titicaca: Plateau of Titicaca because its basin is filled by Lake Titicaca, and Peruvian Plateau because the legislators of Peru, Manco Capac, the first of the Yncas, and his consort, Mama Ocello, issued from an island in this lake.

The Bolivian "Sierra altisima," which rises on the east of the lake, soon enters Peru. Here, though less elevated than in Bolivia, it is still very lofty; it is deeply cut by an infinitude of torrents belonging to the basin of the Amazon and forming the immense rios called the Madre de Dios, Quillabamba, Apurimac, and Mantaro; many of its peaks surpass 17,000 feet, in the region of Cuzco, the land memorable in the history of the Quichua people. At the Cerro de Pasco (14,114 feet) the Eastern

and Western sierras unite once more, but only to separate, this time into three chains, namely the Eastern Cordillera, or the Cordillera of the Amazon, the Central Cordillera, and the Western Cordillera, or Cordillera of the Pacific, or again the Maritime Cordillera. The last, the loftiest of the three, is cut by accessible passes which are only 7200 to 7900 feet above the sea, in Cajamarca: the backbone of South America is, as it were, half severed at this point, which is at about one-third the distance from the Panama depression to the gap of Perez Rosales, in southern Chili. The Western and Central Cordilleras are welded together again at the knot of Loja, in southern Ecuador. The Eastern, which does not rejoin the other two, is lost on the Amazonian plains. Seen from these plains, as it is on a much lower pedestal than the other chains, the Eastern Cordillera has the most imposing appearance of all the Peruvian Andes, and, being infinitely better watered than the others, it has more attractive, more harmonious sites, and a greater amount of fruitful soil. The boundless plain which it overlooks bears the name of Los Bosques, or the Woods, and more generally still that of *Montaña*; the term *Montaña* does not signify Mountain, but rather Wooded Country. Here stretching from horizon to horizon are vast tracts of marvelously leafy forests. Though La Costa, at a distance from the irrigating canals (*acequias*), is perhaps the driest and most parched region in the globe, there is no spot in America better watered than La Montaña, none where the vegetation is more luxuriant; here we find the favored portion of Peru (although not the richest in gold), the tropical Peru, which was but little penetrated by the Quichuas; these Indians, whether dwelling in the hot lowlands or on the cold uplands, were everywhere unaggressive, and they seem to have feared the Montaña, with its gloomy cañons and dark woods, its arrogant exuberance, and its invisible savages ever on the alert with bow and poisoned arrow.

The Marañon, the Ucayali. — Peruvian Railroads. — Just as rains are exceedingly rare on the Pacific slope, so there is relatively little snow in the western or central mountains, owing to the extreme dryness of the atmosphere; the Andes contain greater masses of persistent snows directly on the equator than they do in the Peruvian cordilleras, under the 20th parallel. The torrents of southern Peru are therefore scant whether they flow into the Valles, or descend to Lake Titicaca, or are lost on the plateaus, which are here impregnated with saltpetre, borax, and nitrate of soda; but in the east, where rains are abundant, the great rios are formed which give rise to the Amazon.

The Marañon, which is incorrectly considered the parent branch of the Amazon, flows down from the mountain of Cerro de Pasco. Its source is the Nupe, a stream 35 or 40 miles long, which mingles its waters with those of the outlet of Lake Lauricocha. Lauricocha, which was long supposed to be the head-waters of the Amazon, lies 13,780 feet above the seas, 125 miles from the Pacific, and more than 1850 from the Atlantic, into which the stream empties. The upper course of the torrent (for the future fresh-water sea is here an impetuous river) is 500 miles long. It flows near Cajamarca, the ancient city where descendants of the Yncas still dwell — a city sacred to those Quichuas who yet dream of independence; then, instead of piercing the Maritime Cordillera on the west in order to reach the near waters of the Pacific, it cuts through the Central Cordillera by twelve or fifteen *pongos*, or defiles: on entering the last of these passages, the Pongo de Manseriche, it contracts from more than 1600 feet to 100. These narrow passes and rapids are not insurmountable obstacles to canoe navigation.

The word *pongo* is a distortion of the Quichua term *puncu*, which signifies "gate"; as this idiom is still the prevailing tongue of the country, a multitude of place-names are the same as before the conquest; the rest are Spanish, or are oddly compounded of words taken from the two languages, as, for instance, Polvorayacu, Powder River. *Cocha* (lake), *yacu* (river), *all* (bridge), *urcu* (mount), *cajas* (upland), *pampa* (plain), *llacta* (country), *rumi* (stone), *puma* (lion), *hatun* (great), *uchu* (small), *yana* (black), *yura* (white), *puca* (red), — these roots and others are widely used in naming localities.

From the Pongo de Manseriche, the stream, the bed of which is already less than 500 feet above sea-level, flows easterly through the wooded plains or naked campos which constitute the larger part of the Peruvian Hot Lands. Here it encounters the Huallaga, a navigable river which is becoming more and more a highway between Europe and Peru; then it is doubled, or possibly tripled, by the accession of the Ucayali, a broad and tortuous torrent which reaches the junction from a much greater distance than does the Marañon itself. The Ucayali rises at least five degrees farther south than the Marañon; it issues from the mountain maze which separates Arequipa from Cuzco by a chaos of sierras, *cumbres*,¹ páramos, valleys, and precipices. Under the name of Apurimac,² it flows through frightful gorges; it receives the Mantaro and the Quillabamba; then dividing into arms, it winds in ample folds through the swamps and forests of the Pampa del Sacramento and carries to the Marañon a stream evidently superior to the river which escapes from the Pongo de Manseriche. This is the true mother of the Amazon.

Peru has constructed lines of the boldest railroads in the world, connecting the navigable affluents of the Amazon with the Pacific, across the bristling back of the Andes. The famous Pacific Railroad of the United States, in its route between the plains of the Great West and San Francisco, traverses the Rockies and the Sierra Nevada by passes 7000 to 8250 feet high, but the Peruvian ways reach elevations of more than 14,500 feet. From the rainless seaboard where summer has neither beginning nor end, they climb along imposing cañons, on cornices, curves, and bridges, and through trenches and tunnels where summer itself is chilled by the northern blasts; such, for instance, are the lines from Lima to La Oroya, and from Mollendo to Puno,³ a port of Lake Titicaca. These works are in no way Peruvian except by the surface which supports them and a part of the laborers who were employed in their construction; the capitalists who projected them and the engineers who laid them out were foreigners. The men who are thus binding together the fragments of the future Latin empire, levelling the mountains of Spanish or Portuguese America, spanning the *raudaes* and the cataracts which break the flow of the great rios, and cutting arrowy paths through the pampas of the Plata, are all from the United States or different European countries.

The Quichuas and their Language. — Races and Cities. — The population of Peru

¹ Summits.

² From two Quichua words, *apu*, "master," "lord," and *rimac*, "noisy."

³ The corporation operating the system of railways running from Mollendo to Puno and Cuzco, propose to extend their lines southward along the border of the lake to the Bolivian frontier, thus opening easy communication with La Paz, the capital of Bolivia. This project, when carried out, will not only be of great commercial importance, as a large part of Bolivian trade to the Pacific will necessarily pass over this line, but Peruvian statesmen foresee in the proposed bond between the two countries possible results of the highest import. Under the direction of New York capitalists, the Oroya Railroad is being extended to the Ucayali silver district and to the silver-mining district of the Cerro de Pasco. — Ed.

is rated at 2,700,000,¹ though the number is uncertain; the Peruvians live at altitudes ranging from sea-level to 16,188 feet, the height of the dwelling in the col of Rima-huasi, between Cuzco and Puno. Of these inhabitants, it is supposed that 1,555,000 are Indians, 372,000 Whites, and 670,000 cross-breeds; there are 53,000 Negroes and 51,000 Chinese. The majority of the Indians are Quichuas; these are bordered on the south by Aymaras, who speak a language closely allied in structure to the Quichua. The Quichuas derive their name from a word in their language meaning "temperate land," in opposition to Puna, which signifies "cold land." One would say that these ill favored, olive-colored people were in mourning for the lost greatness of their race; there is no gayety, no rejoicing in life, hidden behind their melancholy submissiveness of expression. Trodden under foot in former times by the Whites, — as they are to-day, in spite of a vain reputation for freedom, — they have no love for the pale-faces, and they retreat as far as possible from them. This savagery augments their gloominess of disposition; everything in their nature, even their joy, seems to spring from a disillusioned soul. Still, underneath their shrinking, sly deportment, underneath this outward moroseness, this seeming weariness of spirit, and all this apparent decrepitude, we find a lively sense of duty, a profound love of country, and an unconquerable tenacity of purpose. Had it not been for the chance which brought about the Spanish conquest, they would have become a mighty people, consolidating their power, as did the old Romans, by the settlement of conquering families on the conquered territory; as it is, they have been reduced through the brutality of their masters to a herd of slaves who, looking on life as a toilsome, sorrowful journey, do their tasks and suffer uncomplainingly; they find their only joys in solitude, the songs of their old Indian language, a few festivals, the dull intoxication of chicha, and the use of the coca-leaf, which, slowly chewed, stimulates their nerves and tempers their muscles.

The Peruvians of Indian stock have adopted the Romish religion, but they have retained their national idioms.

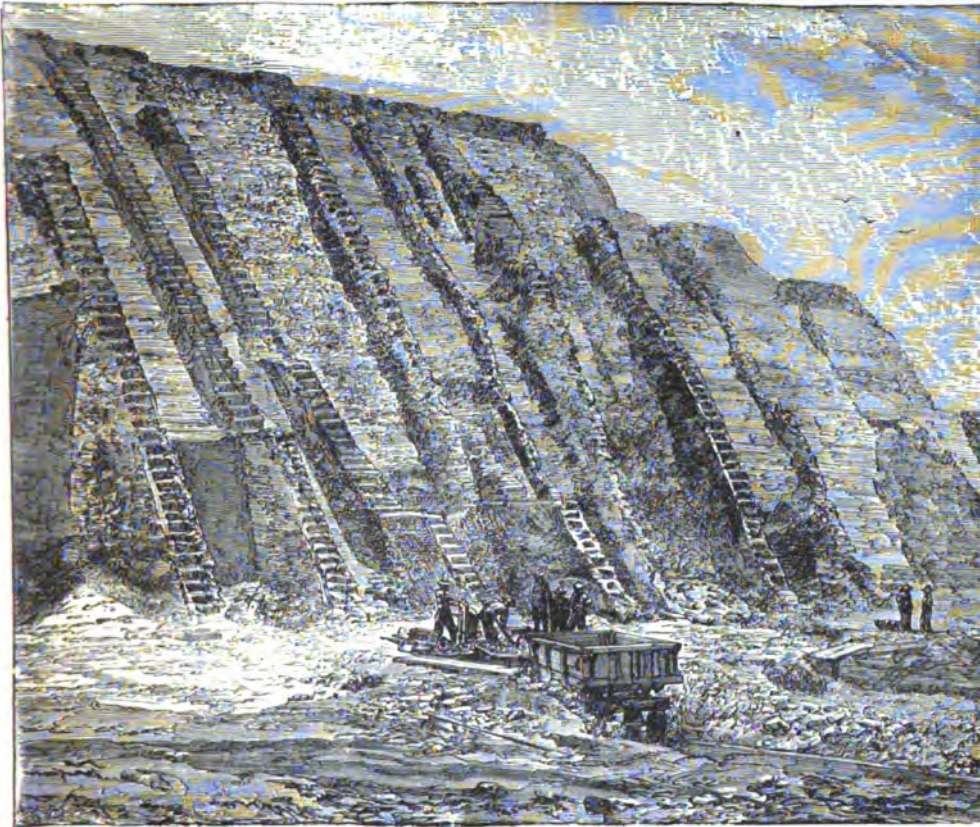
Aymara is still spoken in the south; in the centre and north — in the larger part of the state — the prevailing speech is Quichua, the ancient tongue of the Yncas. Quichua is a difficult, complicated language, but extraordinarily poetic, and capable of expressing the almost inexpressible. This idiom, moulded on the gloomy, shy Indian soul, is even used by numerous descendants of the Conquistadores. It is the sole language of 1,200,000 to 1½ million Peruvians in the departments of Huancavelica and Jauja; from there it extends sporadically into Ecuador; it is in use by nearly 2 million men among the Ecuadorians, the Bolivians, and the few Argentines who have remained faithful to it. Spanish, the tongue of the *gente distinguida*, predominates on the coast, in the Valles, in the large towns, and it serves everywhere in official intercourse; it is gradually conquering the country and is exceedingly well spoken.

Though more than 50,000 Chinese have already settled in Peru, only 18,000 Europeans have come to seek fortune or subsistence here. Among these, the Italians form the predominant element, and next in order are the French. Nearly all the Europeans live in Lima or in the coast cities; very few ascend to the plateaus, but the Chinese are found to some extent everywhere, occupied in all kinds of labor, — removing guano, working on the railroads and plantations and at the various trades.

The capital, Lima (pop. 104,000), is a pleasure-going, fashionable, lazy city on the Rimac, the Noisy, which has its source in the Maritime Cordillera. Lima's one-story

¹ See page 697.

houses, its vulgar church edifices glittering with gold and silver, and its deserted cloisters, stand on ground often shaken by earthquake shocks; it lies at an elevation of about 575 feet, 9 miles from Callao (pop. 34,000), its port on the Pacific. It is situated in the entirely rainless zone of Peru. If a great storm should ever break over it, this town of sun-dried bricks would take the road to the Pacific along with the Rimac. The "city of the kings," or rather of the viceroys, rises as a gray mass under a gray sky, a checkerboard of low houses bordering narrow streets; it has the most vigilant guardians of the public health, for it is cleaned at all hours of day and night



GUANO DEPOSITS ON THE CHINCHA ISLANDS.

by vultures: these voracious, bald birds see and scent from the high air, and from prodigious distances, the smallest bit of refuse left on the pavement of the capital. They fear no one, and no one disturbs them.

Cuzco, on a tributary of the Ucayali, 11,368 feet above the sea, contains 18,000 inhabitants, the majority of whom are Indians. The empire of the Yncas formed around this city as a nucleus; and on one of its squares the last descendant of the Sun, Tupac Amaru, the leader of the partisans of independence, suffered death by the Spanish sword, with all his family; it is in the department of Lima and in that of Puno that the Quichuas have best preserved the purity of their race and language.

The Indians look upon Cuzco as the centre of the globe, as the name *Coçco*, signifying "umbilicus," indicates. The city still retains something of the rank and honors of a metropolis, but palaces are few and hovels numerous among its dwellings; it is surrounded by austere mountains. The climate is cold and variable; it rains, according to the proverb, 400 days in the year at Cuzco; and the roaring of the swift *Huatanay* is never stilled at any season.

The Chincha Islands. — The three Chincha Islands lie off the coast, to the southward of Callao. Their masses of ammoniacal guano were once an important source of wealth to Peru. In this rainless climate, the excreta of the sea-birds remain in place, and, in the course of years, form hills of guano, which is highly prized as a fertilizer in western Europe; it is for use on European soil that the Chinese have been employed for years in bagging guano on these three islands. They have toiled here in blasts that seize one by the throat, until they have removed to the last atom the 12 to 15 million tons of the deposits. There are, however, many other guano rocks along the Peruvian coast.

BOLIVIA.

The Bolivian Andes: Puna, Puna brava. — Before the war of 1879–1880 Paraguay was the only South American state that had no sea-coast. Since Chili conquered the allied Bolivians and Peruvians and took possession "forever" of the desert of Atacama on the Pacific, the Bolivians, deprived of this metalliferous Sahara, have become an essentially continental people, like the slightly Hispanicized Guaranis of Paraguay. Bolivia was formed in 1825 from the provinces of Upper Peru which formerly belonged to the viceroyalty of Buenos Ayres; it bears a wholly modern name, which has no root in the old soil of the Aymaras and the Quichuas. It was called Bolivia in honor of Simon Bolivar, the hero of South American independence.

The boundary-line between Bolivia and Peru on the east of the Andes, in the basin of the Amazon, is still unsettled. If the question is decided adversely for Bolivia, this country will be deprived of extensive valleys but of very few inhabitants. In 1867, a vast tract of disputed territory was ceded to the Neo-Lusitanians; in 1880, the Chilians took possession of Atacama; however, the republic of the *punas* and the *yungas* still embraces about 483,000 square miles¹ of uncontested land, with perhaps 2,300,000 inhabitants,² whose growth is wholly independent of immigration. The surface of Bolivia is disposed in cold *punas* and temperate or torrid *yungas*. Although shut off from the sea, it nevertheless possesses — owing to its Selvas and low Llanos — the three terraces of the Andean countries, the *tierras calientes*, *frias*, and *templadas*. The *punas* embrace the Puna proper and the Puna brava. The Puna proper lies at 11,400 to 13,100 feet above the sea; barley and potatoes are grown here, and the guanaco, the llama, the vicuña, and the alpaca, which are the beasts of burden and the wool-bearing animals of the Andean plateaus, browse in its pastures. Above 13,100 feet stretches the Puna brava, or wild Puna, which extends

¹ Bolivian official statistics place the area of the country at 772,548 square miles, and the population at 1,952,089. The littoral province lost by the war of 1879–80 covers 70,171 square miles. — Ed.

² See page 697.

upward to the snow-line, to the dead plains and cold summits where man finds it difficult to breathe: there are páramos in Bolivia so lofty that the *soroche*, or mountain-sickness, renders life on them difficult for the Puneros and impossible to Europeans. Like many a Tibetan convent, like the dwelling in the Peruvian col of Rimahuasi, the houses of Santa Ana, a Bolivian village, may be classed among the really "sublime" human habitations; Portugaleta is 14,075 feet above the seas; Potosi lies at an elevation of 13,294 feet. Other cities and towns and numberless hamlets are built at lofty altitudes, in the punas bravas and on the páramos, where the dry cold of the atmosphere prevents the growth of everything but the greenish lichen called *llareta*: the snow whirls here, the winds whistle, the slender, twisted, frozen shrubs creak and bend, and the caravans pass with the men masked to protect their faces from the cutting air.

Before exact measurements had been made in the Andes, it was thought that the loftiest peaks of the cordilleras were in Bolivia; the height of Illampu, or the Nevado de Sorata, was given at 24,587 feet, instead of 21,490, its true altitude. On issuing from Chili, the Andes exhibit a tendency to divide into two or three chains; the ranges thus separated approach again a little farther on, and then divide once more, and again form a new knot. There are several of these knots in Bolivia. Frightful páramos, dry pampas, marsh-bottoms, sandy plains, and salt lagoons are imbedded between the chains which are thus detached and thus united: we find here unsightliness, cold, and poverty, only a few hours' or a few days' journey from the beauty and warmth, the forests and rivers, and all the youthful opulence of the yunga.

With the loss of the littoral province of Atacama, Bolivia relinquished her part in the great Western Cordillera, which is separated from the Eastern or Royal Cordillera by all the comparatively low country of Titicaca and the Desaguadero: at the utmost, she retains there a share in Mount Huallatiri (19,700 feet), on the Peruvian frontier, and all of Sajama (21,047 feet). But Bolivia still claims the Cordillera Real, which has a mean elevation of 15,423 feet, with the snow-line at 17,257 (owing to the extreme dryness of the atmosphere). The names in this chain—some of which possess all the stately sonorousness of genuinely Spanish terms—often recall by their strange forms the fact that these mountains cast their shadows on valleys where the Indian maintains his language against that of his oppressors.

What summit rules in this Royal Sierra, which rears its white granitic tops along a line of 530 miles, between punas and punas, or punas and yungas? Is it Illampu (21,490 or 21,286), which bears the harmonious name of Nevado de Sorata? Is it the Nevado de Illimani (21,355 or 20,994)? Chachacomani has an elevation of 20,355, Huaina Potosi 20,171, and many a "snow mountain" reaches an altitude of 18,045. Other Andes bristling with peaks, domes, and points more than 16,000 and even 18,000 feet high branch off from the Cordillera Real on the east. These spurs, more or less nearly perpendicular to the main sierra, and more or less nearly parallel to one another, run to the eastward, into the regions of Cochabamba, Sucre, and Potosi, as far as the llanos, selvas, and pampas of Bolivia, Brazil, Paraguay, and the Argentine Confederation—extensive level tracts sloping gently toward the Amazon and the Plata. As these mountains command these vast plains, they make the acropolis of Bolivia the key-stone of Spanish America, as Minas-Geraes is the key-stone of New Portugal. Illampu and Illimani look down from a distance on the shores of Lake Titicaca and the Desaguadero depression.

Lake Titicaca and the Desaguadero. — The Deserts of Lipez. — Titicaca, the sacred

lake which beheld the birth of the dogmas, laws, and legends of the Peruvians, belongs partly to Peru and partly to Bolivia; the latter possesses the eastern and southern portions, which are nearly isolated from the rest by the long peninsula of Capacabama. Titicaca has an area of 3250 square miles, a maximum depth of 715 feet, and it is situated at an elevation of 12,605 feet.

It is drained by the Desaguadero, or the "Outlet," a stream wholly on Bolivian territory. The Desaguadero runs east-south-east, like the two colossal sierras which hug this closed basin on the east and west—this plain of Oruro lying between 12,100 and 13,800 feet above sea-level, and in which most of the Bolivians live. With a breadth varying from 160 to 525 feet, and with a very tranquil course, for it descends only 466 feet in 200 miles, the river flows to the Pampa Aullagas (12,140 feet), an exceedingly deep lake, which receives from the Desaguadero and from the neighboring sierra on the east more than 3500 cubic feet of water per second in dry weather, but which discharges only 35. And this brook of 35 cubic feet, the offspring of several rivers, is lost in the Cienega de Coipasa (12,090 feet), a hollow which cannot be called a lake although Sajama and Huallatiri despatch to it a mean of 1200 cubic feet per second. The Desaguadero, which terminates thus at present, perhaps once reached the far away Atlantic through the Rio de la Paz, the Beni, the Madeira, and the Amazon. If the emissary of the Peruvian lake no longer has the power to pass the Cienega, it is because the urn out of which it flows has shrunk with the lapse of time: hardly a few centuries have passed since—in the days of the Yncas—the then great and brilliant city of Tia-Huanacu bathed its walls, we are told, in Titicaca; now it is 12 miles from the lake to the old city: a few hundred years have sufficed to lower the level of the water one hundred thirty feet. Possibly evaporation is not the sole cause of the scantness of the rio that drains Titicaca; popular belief here connects various sources of the Loa, an Atacaman stream, flowing into the Pacific, and certain affluents of the Pilcomayo, a long river which reaches the Paraguay near Assumption, with *pertes* from the Desaguadero. The Desaguadero may be discharged in part into underground currents, in the same way that it is perhaps partially fed by hidden streams, for the outlet of Titicaca issues from the lake with twice as much water as the latter receives from the visible affluents; it is possible that bottom springs supply the rest.

South of the spot where the remnant of the Desaguadero disappears, the plateau becomes more and more arid; it is only during a chance storm that the cañons, furrows, and fissures whirl a temporary flood of water down to the lake of Salinas, a vast salt field which is white and sparkling or covered with turbid water according to localities. The transient rios suddenly transform it into a lake which, from the distance, would deceive a traveller; but nakedness reigns around this false Leman; there is mire on its shores, and briny bitterness in its bosom. The whole desolate region is uninhabited: it is a *despoblado*, which the Indians name the deserts of Lipéz.

Great rios: The Madeira. — The Yungas. — The Puna begins about 11,400 feet above the seas. Below this altitude, down to about 10,000 feet, we are in the *Cabecezas de Valle*, or Valley Heads — the corn and grain district. From 10,000 down to 5500 or below 5000 feet, we find the Valles (valleys), or Medios Yungas, and below 5500 stretches the torrid land, of the Yungas, so called from an Aymara word signifying "burning valley."

The Yungas (where the jaguar lurks) comprise exuberant lands lying along a net-work of rios which go to form the mighty Madeira. These rios unite first in four

superb currents. The easternmost, the Guapore, rises in the Brazilian state of Matto-Grosso, not far from the sources of the Paraguay, on the uncertain slopes of the Campos dos Parecis, where many a lake, many a swamp, and many a rio waver between the Amazon and the Plata, and are discharged into both when swollen by powerful rains. The Guapore, with a length of 870 miles, drains a basin of 193,000 square miles and carries from 23,410 to 175,000 cubic feet per second (according to the season) into the Mamore. The Mamore, which is very much longer than the Guapore, for it winds in immense curves around the mountains in Cochabamba, brings to the rendezvous from 29,484 cubic feet per second to 247,000 or more; the Mamore retains the name. The Beni (930 miles), or Veni, was once the chief stream of the globe, if it is true that it drained, through the Rio de la Paz, the lake, or we might say the inland sea, of Peru, of which nothing now remains except Titicaca, the Pampa Aullagas, and the Ciénega de Coipasa; the Beni was then the head of the Amazon. Augmented by the Madre de Dios (more powerful than itself), it carries at its confluence with the Mamore from 48,835 to more than 459,000 cubic feet per second. The four rivers together form a stream having a mean current of 517,000 cubic feet and a low-water flow of 146,257; its floods deluge the campos and forests.



A BOLIVIAN.

At the junction of the Beni with the Mamore the waters take the name of Madeira. Above and below the mouth of the Beni they descend by a series of falls: about fifteen rapids and the four cataracts of Bananeira, Ribeirão, Girão, and Theotonio carry them down the slope 236 miles long by which they reach the plains from the uplands. After the last of these plunges, the river has a peaceful journey of nearly 650

miles before reaching the Amazon. The Madeira takes its name from the Portuguese word *madeira* ("wood," "madrier"), on account of the trees which it floats down to the Amazon; it is nearly 2175 miles long, with a breadth in the lower course of 5000 to 6000 feet.

The Bolivian Andes, which are even now rich in the metals that made the fortune of Potosi, overlook valleys where the temperature varies much according to altitude. Tropical humidity and luxuriance are to be found in the marvellous gardens of the Yungas; cool, pleasant breezes blow over the plateaus; the settler who longs for severe cold, grassless sod, treeless sierras, gloomy skies, and chill, blustering winds has only to climb to the páramos of the Puna brava. This highest habitable story of the Bolivian abode is not only the most desolate but the most healthful: the European, especially, lives to a greater age in the Puna than in the Valles, and in the Valles than in the Yungas; in this last region, as in all "lands flowing with milk and honey," the air is too mild, the sky too brilliant, and life too easy; man loses his will-power, withers, and dies before his time.

Aymaras. — Quichuas. — Guaranis. — Bolivia is thought to contain at present 2,300,000 inhabitants, not including the *Indios bravos*, whose number no one knows, but who are estimated at 250,000. At the close of the struggle for independence, the Bolivians numbered less than a million, but they would count more than three million to-day if the energy and blood of the country had not been squandered in civil wars which can find excuse neither on the ground of honor or loyalty.

The majority of the Bolivians claim to be of Spanish lineage, though they are largely of Indian origin, with very little or no *sangre azul* in their veins; "Latin" blood predominates nowhere except in the department of Tarija, and it is preponderant here chiefly in the cities. As in Peru, so in Bolivia, Quichuas and Aymaras form the essential element of the nation. The Quichuas live in the south and east, in the vicinity of Potosi, Chayanta, Sucre, and Cochabamba; they are small, thick-set, ill formed, with heavy bodies, short legs, and very homely features; the Quichua and White half-breeds are entirely devoid of beauty. The Aymaras inhabit the west, the department of Oruro, or the Plateau of Titicaca, and the department of La Paz; then, crossing the frontier, they extend over the south of Peru, from Arequipa nearly to Cuzco, south-east of a line, on the north-west of which the Quichuas begin again. They are therefore crowded on the north and on the south by the nation descended from their ancient masters, the Yncas. The Aymaras number at present perhaps a million men, — three-fifths of whom are in Bolivia, — but they were once more numerous, possibly far more so; the race of Titicaca,¹ as it is sometimes called, from the lake around which its villages are built, has nevertheless held out against great odds; first the Quichuas trod them under foot, and later the Spaniards wore them out in the mines and on the plantations. Often rebellious, but always conquered, — in the times of the Yncas as well as under the Castilian viceroys, — these incredibly tenacious men, nearly all of whom live at altitudes varying between 10,000 and 16,000 feet, have preserved their language, which is very complicated, supple, and capacious, at once energetic and graceful; it is said to be superior to the Quichua. With the exception of an external adherence to the forms of Roman Catholicism, they are true to the heritage of the past. They are short and thick-set, as ugly as the Quichuas, or even more so, and the families which spring from their alliances with the Whites retain all the coarseness of the people of Titicaca.

¹ Titicaca is an Aymara word, meaning Tin Stone.

The Guaranis who have come from Paraguay by the Pilcomayo constitute the chief element of several districts near Santa Cruz de la Sierra. In the Valles, a fourth part of the inhabitants are Negroes.

All the Bolivians except the *Indios bravos* profess the Roman Catholic religion. Spanish, which is the tongue of the Whites, the idiom of books, of newspapers, and of business, has by no means conquered the guttural Quichua, with its long words and complicated forms, nor the equally guttural, long-worded, and complicated Aymara; it is destined, nevertheless, to triumph over these idioms, although they are to-day the national speech of 3 million men—almost all mountaineers in Ecuador, Peru, and Bolivia. The language of Cervantes, wide-spread as it is throughout the world, and spoken by so many young peoples in America, will not retreat before two unlettered tongues of the Cordilleras.

Cities.—Since 1857, the Bolivian government has resided at La Paz de Ayacucho. — We know what a passion the Peninsulars have always had for showy, bombastic, sonorous, or, in short, Castilian names; but time, which erodes the marbles and chills the suns, has effaced a half of these vain titles: and La Paz de Ayacucho¹ has become La Paz. This town of 57,000 souls lies in a valley, encircled by lofty mountains. It borders a torrent which becomes the Beni and which, below the capital, enters the gorges of La Angostura, where it descends nearly 7900 feet in a broken course of 47 miles. The inhabitants of La Paz dwell at an altitude of 11,942 feet, 26 miles in a straight line from the Nevado de Illimani, and 30 from Lake Titicaca; the nights are cool, the air dry, and the yearly mean is about 50° F. Yet La Paz is situated between the tropic of Capricorn and the equator.

Sucre (pop. 17,000) was once the seat of the government; the city derives its present name from an Independence general; it was formerly called Chuquisaca, from *Choque Saca*, the Golden Bridge. The Sucrians live at an altitude of 9318 feet, near the water-parting between the Madeira, which runs to the Amazon, and the Pilcomayo, which flows to the Plata; Quichua is almost the only language spoken in the city.

Potosi (pop. 12,000) contained 170,000 inhabitants in 1711. It was then the metropolis of South America, the city of fabulous riches, of speedily acquired fortunes, and stupendous failures caused by extravagance and folly. Its silver-mines were unrivalled in the world; the product of these mines has been estimated at from 1800 million to 6800 million dollars.

CHILI.

Tierra del Fuego. — Strait of Magellan. — The name of this very long country is properly written Chile, though the form Chili is in general use. Its territory, which was much enlarged by the late war of the Chilians against the allied Peruvians and Bolivians, now embraces 299,600 square miles; the inhabitants number about 2,956,000.²

There are no llanos nor campos in Chili, and the tropical portion of the country is

¹ The surname Ayacucho commemorates the victory which put an end to the war of the Spanish colonies against Spain.

² See page 697.

occupied by a brazen desert. The surface does not divide here, as in the other Spanish-speaking countries of America, into Hot, Temperate, and Cold Lands, but rather from north to south into Parched, Half-Parched, and Wet Lands, and from west to east into Coast and Sierra.

The Andes make their first appearance in the rocky archipelagoes which flank the large island of Tierra del Fuego on the south; the most southern mass projects into the sea as the famous Cape Horn.¹ Tierra del Fuego is a land of ice and of fogs which are never rent by the sunlight. There are few bays, mountains, forests, fens, and peat-bogs that are so rarely lit up by the sun as are these islands, where the mist falls in drops — especially in the western part, which belongs to Chili. The eastern portion, pertaining to the Argentine Republic, has a drier soil, a less uniformly gray and wet climate, and a greater number of fair days; prolonging, as it does, the Patagonian Pampa, it has something of the Pampean aridity of climate, in spite of the surrounding sea, while in Chilian Tierra del Fuego it rains or snows 25 days every month, summer as well as winter: it sometimes happens that the ground is white with deep snows even in the season of the longest days;² and the green sea is often white all along the coast, for the winds, which are more tireless here than anywhere else in the world, raise monstrous billows that break in foam on the shore.

The eastern portion of the archipelago is inhabited by giant Patagonians; the Fuegians, who occupy the west, are of lower stature, with very big heads and powerful, thick-set bodies on small hips and spindling legs; their hair is knotted like that of the Furies. They fish for everything that lives in the sea, even to the whale; and they are skilful hunters with the bow and the sling: they go half-nude, with no protection against their atrocious climate except a coat of guanaco-skin or of seal-skin. Their prolificness is of little avail, for the majority of the children die from exposure to rain, snow, sea-spray, and hurricanes. The Patagonians and Fuegians together number perhaps 10,000. It is here on Chilian territory that the first high Andes rise, — Mount Darwin (6890 feet) and Sarmiento (6791 feet).

Tierra del Fuego, Clarence Island, Santa Ines Island, and Land of Desolation face the mainland along a tortuous strait which offers an interior passage from the Atlantic to the Pacific to vessels that fear to encounter the winds and enormous waves of the sea south of Cape Horn. This pass is called the Strait of Magellan, after the navigator³ who first entered it, and who also made the first circumnavigation of the globe. The strait is long and broad, but it is foggy, stormy, and difficult. Its Chilian village, Punta Arenas, contains 1200 or 1500 inhabitants; these are exiles, land-grantees, coal-miners, men seeking the yellow metal in the neighboring auriferous torrents, and adventurers driven by chance to this Ultima Thule of the Chilians.

The Andes: Volcanoes, Lakes and Rios. — Passing from the islands to the mainland, the already imposing Cordillera of the Andes extends northward, sharply separating two wholly dissimilar physical regions: on the east, the cold, sterile Argentine plateaus stretch away monotonously to the distant Atlantic; on the west, the near waters of the Pacific are strangled in twisted channels formed by an infinite number of small islands. The waves can be seen from the snowy peaks, or, rather, they could be seen if it were not for the fog and the rain. The sky drips here day and night, the year round, over the scarped islands, the maze of islets, the net-work of fiords, the evergreen beech forests, the chafing torrents,⁴ and the glaciers which

¹ Cabo de Hornos.

² The summer mean is only 7° to 9° F. above the winter.

³ A Portuguese named Magalhães.



THE ANDES OF TIERRA DEL FUEGO.

descend to the very water's edge. There are glaciers lapped by the ocean as far north as the 46th parallel. The nevados rise from 6500 to 12,697 feet (the altitude of Saint Valentine). Some of them are extinct or active volcanoes—how many, no one knows.

This is incomparably the most fringed portion of the slightly indented South American shores, and it is even one of the most jagged coasts in the world. Its largest islands are Wellington (on the south)—a name that sounds discordant on this Spanish and Indian littoral—and Chiloe, or Chilehue, *i. e.*, “a part of Chili”: the latter comprises 3250 square miles, with 78,000 islanders who are Castilianized Indians. Opposite it towers a magic land bristling with lofty peaks, nevados, and volcanoes, covered with forests, and studded with crystal lakes; from all these eminences many a strong, limpid torrent flows down to the coils and curves of the sea imprisoned at their feet. Yet no cone here reaches an elevation of 10,000 feet. One of those which growl at times, the volcano of Osorno (7405 feet), overlooks Llanquihue, the Chilean Lemna, a deep basin of clear water, nearly 125 miles in circumference, and at an altitude of 141 to 144 feet: this cold lake discharges the 8800 cubic feet of water per second that forms the source of the Maullin.

North of the Maullin, the Bueno, another full and transparent rio, receives the waters of three lakes at the foot of the mountains, namely, the lakes of Rupanco, Puyehue, and Ranco; the Valdivia drains the lakes of Calafquen, Panguipulli, and Rihue; then, still moving northward, we cross the Tolten, the outlet of the lake of Villarica, whose azure is clouded at certain hours by the shadow of the superb volcano of Villarica (16,001 feet); then the Cauten, or Imperial River, which flows through Araucanian territory; then the Biobio, the longest of the Chilean streams; and lastly the Maule, which marks the southern boundary of the old empire of the Yncas. But as we advance toward the hot region, we gradually pass from the very wet zone to the half-parched, and we find the rivers shrinking in volume; the sierra at the same time becomes more and more lofty and less and less snowy: north of the Dezcabezado de Maule there are no snow-masses and no persistent glaciers except at very great heights.

The Chilean giants lift their heads near Santiago (the metropolis), on the south-east, east, north-east, and north: these include the volcanoes of Maipo (17,664 feet); San José (20,000 feet); Tupungato (20,269 feet), the most northern volcano until we reach the fiery mountains in the lands recently annexed from Bolivia and Peru: Juncal (19,495 feet); Cerro del Mercedario, or Ligua (22,304 feet): this culminating peak of the Chilean mountains is only 118 feet lower than the Argentine Aconcagua,¹ the highest summit of the Andes and of America. Other peaks estimated at 20,000 feet and over tower above Atacama, in the north of the republic.

Atacama.—Atacama, the driest region in the world, comprises Atacama proper, the Pampa de la Piedad, —conquered from Bolivia,—and the Pampa del Tamarugal — seized from Peru. Rain never falls here, and the atmosphere is so dry that bodies are preserved for years and even centuries in the sands, which are impregnated with salt and saltpetre. It is said that there are cemeteries here in the open air, where—instead of decaying in the ground, or resolving into ashes on the funeral pyre—the dead sleep unchanged (unless disturbed by the birds), seated or lying in a circle, each with his kettle and his pitcher of maize.

As there are no wells of any description, and no torrents (for the neighboring cor-

¹ Near the Chilean borders, however, north-east of Santiago.



TRAVELLING IN THE CHILIAN ANDES.

dillera, notwithstanding its elevation, has little snow and few springs, and its rivers disappear on entering the desert), recourse is had to the sea for drinking-water. The salt floods are distilled in huge factories and then transported long distances for the use of the thousands of men who are attracted into this desert by the fabulously

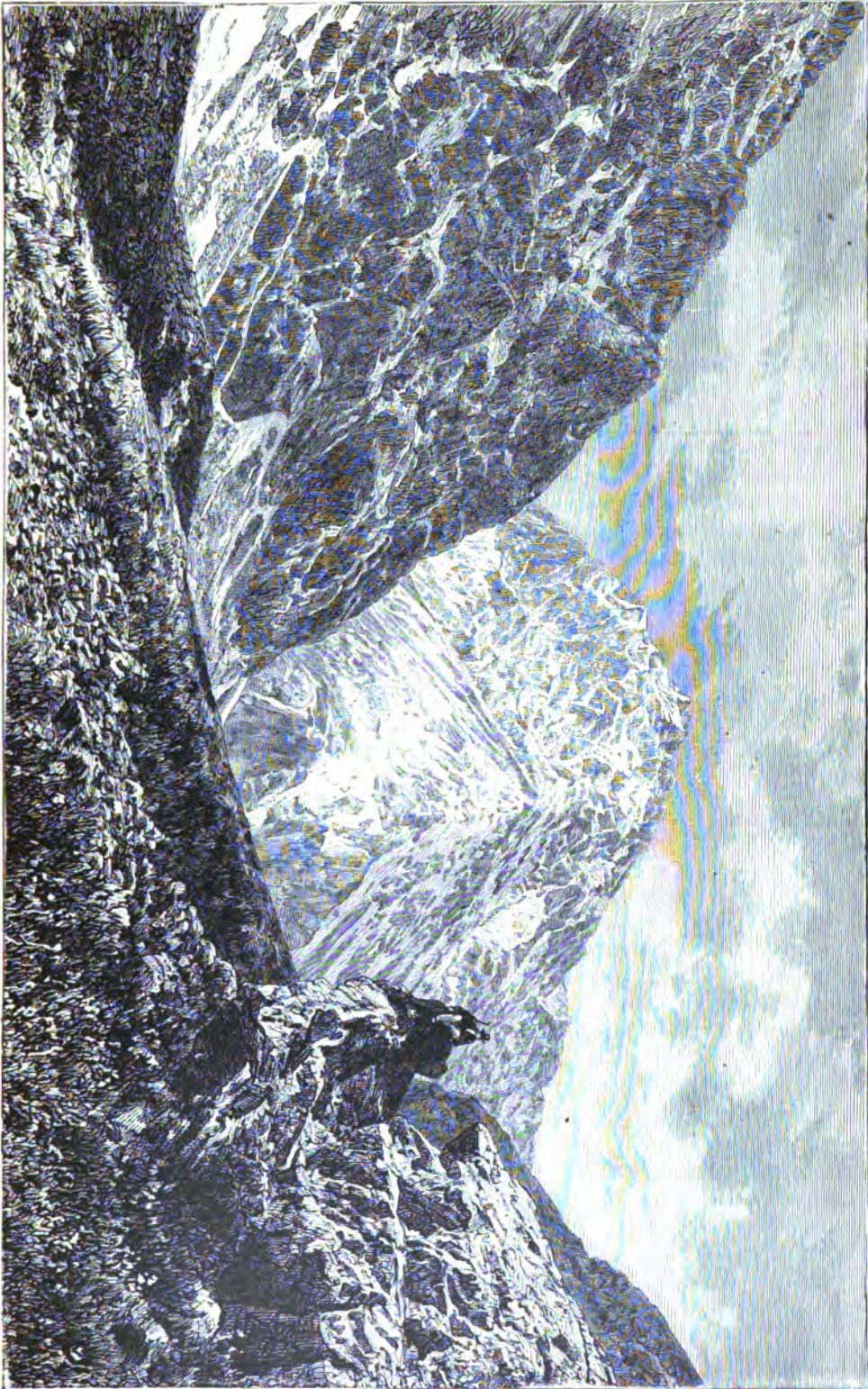


A FUEGIAN WOMAN.

rich mines. This coast knows neither rain nor shower nor change of season; there is no winter, no autumn, no vernal splendor, but one unending summer. However, though nature's forces are usually dormant here, they sometimes awake with sudden fury. In 1868, an earthquake levelled the coast town of Arica, and at the same time two waves from the Pacific lifted their crests, one after the other, against four villages on the shore, sweeping them away with all their inhabitants. In 1877 a still more formidable wave rose 65 feet at Mejillones.

As though to inflict the punishment of Tantalus on the thirsty cities that man has built under the brazen vault of Atacama, thick clouds often bar the horizon—not for an hour or a day, but for weeks at a time. This cloud, called *garua*, bespeaks rain to no one but the stranger unfamiliar with the country; it never dissolves in showers, but descends as an imperceptible dew which imparts a little freshness to the thin grass of the *lomas* (hills, mountains); as for the valleys dominated by these lomas, they receive nothing from the invisible mists. Tamarugal and Atacama occupy over 500 miles of Chili's 2500 miles of length.

The Chilians and Araucanians.—Atacama and Tamarugal contain together scarce 120,000 souls, and there are only a few thousand inhabitants south of the province of Llanquihue and the island of Chiloe. Though Chili extends from the 21st to the 56th parallel of south latitude, nearly all of the population is concentrated between the



MOUNT JUNCAL.

27th and the 43d, from the sea to the foot of the Cordillera, and in different sierras and inter-sierras. There are at least two ridges between the Atlantic and the Great Andes. Starting from the shore, we climb the Cordillera de la Costa, only to descend into *valles*; then we ascend the Cordillera del Medio, by the eastern declivity of which we reach the *Valles andinos*, and at their east we encounter the *Cordillera Altisima*. In middle Chili, then, the great torrents flow from the highest snows, leap into an Andean valley, cut through the middle cordillera, grow calm in a new *val*, then pierce the Cordillera of the coast, and finally bury themselves in the Pacific, after having irrigated campos which would be excessively sterile but for these water-courses;—but the canals from the rios have converted Chili into the garden of the New World and the granary of the Pacific.

The birth-rate and death-rate are both high in Chili; but the nation would increase by 30,000 to 40,000 yearly if it were not for an extensive emigration of miners, navvies, labprers, and settlers. These men go with their families to establish homes on the eastern slope of the Andes,—a migratory movement which dates from the old days of the colonial era, when the present Argentine provinces of San Juan, Mendoza, and San Luis formed a part of Chili. These losses are not the sole cause of Chili's slow growth. In this country of vast domains there are no peasants, in the true sense of the word, zealously cultivating soil in which they have an ownership: the toilers here are hired farm-hands, shepherd-boys, and peons,—and these, weary of bending over the spade, or tending the herds for the profit of others, emigrate not only to the Argentine Republic, but also—and chiefly—to the high Peruvian valleys, where land is cheap. In a single year Chili scattered 30,000 of her children. And few Europeans immigrate to Chili; Europe is too far away.

The Chilians, though much more Europeanized than the Bolivians, Ecuadorians, or Peruvians, are nevertheless largely of Indian blood by their mothers. They are descendants of the autochthonous Araucanians and the Whites sent here from the Iberian peninsula. The Araucanians, who formerly had their outposts on the margin of the desert of Atacama, and who extended from there as far as the southern point of South America, had not preserved their independence throughout all this territory; the north of their country, from the Maule as far as the brazen waste which separated them from the Peruvian people, submitted to the yoke of the Yncas; but, on the arrival of the Spanish *routiers*, the emperors of Cuzco had not had the time to remould the Araucanians, mix them with Quichua settlers, and assimilate them to the great race which seemed destined to refashion the half-continent of the Andes. It was there among pure Araucanians that the Conquistadores landed. These Spaniards, however, notwithstanding the much earlier date of their appearance here, perhaps contributed less to the formation of the Chilian nationality than did the Basques. The Basques began to emigrate to Chili between 1700 and 1750, carrying with them that rare excellence of the Esculdunaes, a simple soul in a healthy body. So the vigorous, prudent, sagacious, and hardy Chilian race is derived from strong sources, for in its ancestry are Castilians (joyous Andalusians and stubborn Galicians), Cantabrian mountaineers, and Araucanians. In the lofty Andes, the Indian blood has been but little crossed with white; in the districts which were settled earliest, the amalgamation of races is now nearly complete, but south of the Tolten, along about 95 miles of coast, the Araucanians are very slightly mixed. These savages are of a tolerably light brown; they are manly, proud-spirited, and truthful, and make use of a language as sonorous as Spanish, eloquent, full of imagery, rich, regular, and concise.

They held out for two hundred and fifty years against Spain, and slaughtered more of her soldiers than all the other peoples of the old America together, — with the exception of the Floridians, and the Charruas of the Argentine Republic, — and they were not exterminated as were the latter nor subdued like the former: they lost their northern districts by the slow action of fusion rather than by the force of arms. South of the Tolten, they withstood first the Spaniards, then the Chilian heirs to the rights or the claims of Castile, and they have retained their language and customs.

If the hundred and more Araucanian caciques should combine the forces of the five tribes of their confederation, they could dispose of 17,000 lances. But this people of 70,000 souls is disappearing: tradition, history, abandoned sites, orchards without owners, all tell us that the Araucanians were more numerous in former times than they are to-day; however, each new morning dawns on a richer, more enlightened, and more populous Chili. The Indians are now, it is thought, completely subdued by their half-brother cross-breeds, who are taking possession of the coast, with ports, villages, roads, coal-wells, mining machinery, and tillage. The Chilians are Roman Catholics and speak Spanish, — though with a muffled pronunciation, it is said.

The capital, Santiago (pop. 236,000), rises between the sea and the mountains, 80 miles distant from the Pacific and 1867 feet above it, on the Mapocho, a torrent emptying into the Maipu. Like its port, Valparaiso, it stands on trembling soil, which frequently sinks.

Valparaiso (pop. 110,000), which is built on a dry and desolate shore (notwithstanding its name, signifying Vale of Paradise), is one of the chief commercial cities on the Pacific.

Juan Fernandez. — A very small, much isolated archipelago, composed of the two islands Mas á tierra (37 sq. m.) and Mas á fuera (33 sq. m.), and Santa Clara, an islet of 2 square miles, forms a dependency of Chili. These 72 square miles are occupied by 60 inhabitants. Mas á tierra, or "More to the landward," 350 miles from the continent, supports a mountain of 3225 feet; in Mas á fuera, or "More to the seaward," 450 miles from the shore, towers a peak of 6070 feet. Both islands have forests, waterfalls, and a mild, humid climate, free from miasmata, and forever purified by the sea-winds.

THE ARGENTINE REPUBLIC.

The Argentine Andes. — The Argentine Republic extends over about 1,125,000 square miles, comprising within its limits long and broad deserts; this young country, animated by all the hopes and all the enthusiasm of youth, embraces scarcely more than 3 million inhabitants,¹ in fourteen organized provinces, and on wide *territorios nacionales*. On the east, it borders the Atlantic and the Uruguay and Paraguay rivers; on the west, it is bounded by the lofty Cordillera of the Andes for more than 1850 miles, at hardly 90 miles from the Pacific Ocean. This colossal chain, composed of two parallel sierras, rising at a single vault, straight as a wall, sends off few spurs to the east; the Argentine Republic is therefore nearly all in plains; these include the Pampas in the centre, Patagonia in the south, and El Gran Chaco in the north.

¹ See page 697.

Though the Cordillera is narrow, it towers to the chill heights of 16,000, 20,000, and over 22,000 feet. Aconcagua has an elevation of 22,422 feet, and the Argentines salute in it the king of their nevados as well as the monarch of all American peaks. It rises very close to Chili but wholly on Argentine territory. Cerro del Mercedario (22,304 feet), the volcano of Tupungato (20,269 feet), and the volcano of San José (20,000 feet) are on the very frontier, and separate the two nations. Among the cols cutting this ridge some have an altitude of 10,000 to 13,000 feet; the others, which are very low, serve as a route for the Chilean emigrants who come to settle in the western Argentine states, and herds of cattle and trains of merchandise also pass through them from one country to the other. The day is not distant when one of these *puertos* will be utilized for the construction of a railroad running from sea to sea, from Buenos Ayres to Santiago de Chili.¹

The Andes are very narrow along the horizon of Mendoza and San Juan, but in their course northward they broaden out in contreforts which are prolonged into the provinces of La Rioja, Catamarca, Santiago, Tucuman, Salta, and Jujuy; in the north of the Argentine Republic, these eastern contreforts are very lofty, and the Sierra of Aconquija, west of Tucuman, has peaks between 16,000 and 20,000 feet high; it surpasses the Alps in altitude, and rivals the Caucasus. In the provinces of San Luis and Cordoba, *massifs* united in a sort of triangular acropolis overlook plains of vast extent; their culminating summit scarcely reaches 7200 feet. All these sierras contain rich metallic veins; they send down only weak torrents, for little snow falls, and, owing to the dryness, there is but little persistent ice. It is even remarked that a gradual diminution is taking place in the snows of the Cordillera; in the campos, springs are drying up and rivers are shrinking or ceasing to flow. Nevertheless, ten of the fourteen Argentine states owe all their cultivated productions to the rios of the Andes and of the Sierra de Cordoba.

The Rio de la Plata: the Paraná, Paraguay, and Uruguay.—Three great Argentine rivers reach the sea through the Plata estuary. The Rio de la Plata, between Uruguay and the Argentine Republic, terminates a fluvial basin which is the chief of the semi-continent after that of the Amazon, and which occupies nearly 1,160,000 square miles of the surface of South America. This estuary receives, at low water, 664,370 cubic feet per second, or more than the low-water flow of the Amazon and about the same as the mean of the Mississippi; ordinarily it engulfs about 1,511,000. Steamers have more than 1800 miles before them from the threshold of the sea to the Brazilian Villa Maria, a town on the Paraguay, one of the three principal streams of the basin.

The Plata opens on the sea with a breadth of 160 miles, and throughout its entire course it is never less than 20 to 25 miles wide. The fertility and extent of the regions of which it is the aorta destine it to bear in the future as many ships as any other estuary in the world. It receives the Paraná, which has been swollen by the waters of the

¹ Legislation recently adopted by the congress of Chili provided for the construction of two lines of railway across the continent from the Atlantic to the Pacific coast. Some years ago the Argentine government built a road from Buenos Ayres to Mendoza in the Andes on the boundary of Chili, within 149 miles of Santa Rosa; the latter was already connected by rail with the important Pacific port of Valparaiso. There has been a great demand for the construction of a railroad across the gap from Mendoza to Santa Rosa; it is now hoped that the work will be finished by 1893. This enterprise will probably make Buenos Ayres the entrepôt of the southern half of the continent, and cause most of the freight which now passes around Cape Horn or through the Strait of Magellan, on vessels to and from Valparaiso and the other Pacific ports, to go overland.—ED.

Paraguay and Uruguay. Paraná, in the Guarani tongue, signifies both sea and river. To the minds of the Indians, this name means here the river *par excellence*, and, in fact, the Paraná is to such an extent the real stream of the basin that it carries at scant waters 515,500 cubic feet per second to the estuary, while the Uruguay rolls only 148,835; as for the Paraguay, it is not a current of the first magnitude. The Paraná is already powerful when it quits its native land of Brazil, at the confluence of the Yguazu,¹ at some distance beyond the Salto of Maracayú or of Guayra, or again of the Seven Falls (Sete Quedas), a cataract 56 feet high, where the breadth of the stream is suddenly reduced from 13,600 feet to 200. Above Corrientes, after a voyage of 1850 miles, it encounters and engulfs the Paraguay, which is far inferior to the Paraná, notwithstanding its 1250 miles; but, owing to its waterfall, the navigable course of the Paraná is shorter than that of the Paraguay.

The Paraguay, which is Argentine by one of its banks, carries ships into the very heart of Brazil, into the Cuyaba country; it flows due south through a region tropical in climate, and yet healthful even for the Whites of northern Europe. It receives two long, slender rivers, — the Pilcomayo, which is partly Bolivian, partly Paraguayan, and partly Argentine, and the Bermejo, the main artery of El Gran Chaco. From the Paraguay to the Uruguay, the Paraná rarely contents itself with a bed less than 3 miles broad; it is 9 miles wide on the average, enclosing a net-work of islands, which are covered with opulent woods, the lair of the treacherous jaguar. The principal channel communicates through numerous canals with the minor arms, and the entire amphibious domain is hidden during the great annual floods under 20 to 25 feet of turbid water. In the narrowest part of its course, at the pass of Obligado, which is about 100 miles from the head of the estuary, the stream is only 2087 feet broad, but the Paraná makes up for this extraordinary contraction by a depth of 148 to 150 feet, with a very swift current.

The Uruguay, the second affluent of the estuary, likewise comes from Brazil. It has its *saltos* also, one (the Salto Grande) at Macanao, the other at Concordia. At the Falls of Macanao the stream, which is here Argentine by its right bank and Brazilian by its left, descends several yards in two narrow arms which are separated by a basaltic island: this cataract, or rather rapid, is 8850 feet long; boats risk the descent of it at high water. Below the Concordia cascade, the Uruguay, which is Uruguayan on the left and Argentine on the right, offers no insurmountable obstacle to boats, but it is navigable for large vessels only in the portions influenced by the tide.

Misiones and the Argentine Mesopotamia. — Between the Uruguay and the Paraná, solitude now reigns over a district which was less deserted a hundred years ago than it is to-day; a few hamlets interspersed with paltry towns, and ruins of churches, in the clearings, alone recall the famous settlements founded here by the Jesuits. The good Fathers comprehended the character of the Guaranis, who were men of discipline; they collected them — thoroughly “catechized” — into well ordered communities; and the Indians of the missions were happy, for their race was not one that regretted the loss of space and liberty. The Jesuits were wholly unaided in this work of training, which demanded shrewdness, firmness, intelligence, and perseverance. The Spaniards and the Portuguese — princes, lords, and oftentimes priests — wished nothing of the Indians but their gold, their diamonds, their lands, their “El Dorado,” their “Fountain of Youth,” and their muscles and life for the toils of the fields and mines; no one was eager to love them as brothers. The Jesuits contended sometimes against

¹ This name signifies Grand River.

the rulers in Madrid, sometimes against the American viceroys, sometimes against the bishops, and sometimes against the Indians themselves: not against the pure Indians, but the Lusitanianized Red-skins, known as Mamelukes. After more than one disaster, the Christian Guaranis, under the command of the Fathers, finally vanquished these Mamalucos. The Jesuits' work has perished, the missions are deserted, but the Europeans are already knocking at the door of this hot, tropically fruitful, mosquito-infested country. Until recently, Spanish was almost an unknown tongue here. Guaraní and Portuguese were spoken, but very little Castilian.

The provinces of Entre Ríos and Corrientes also lie between the Uruguay and the Paraná; their surface is flat or gently rolling, and the soil is fertile. The climate is healthful, notwithstanding the heat, and notwithstanding the shallow lagoons, one of which, Lake Yberá (Brilliant Water), is of vast size: it sends its outlets to both the Uruguay and the Paraná. These two provinces possess a few forests. They constitute the Argentine Mesopotamia, a land of the future, but entirely destitute of a past; the coming century will see it stripped of its finest adornments. The settlers who seek its exuberant campos will soon denude, violate, and drain it, subject it to the plough, parcel it out in fields, and cut it with straight roads running through regularly laid out towns. A rich nation will have its abodes here, in this long peninsula which could be easily converted into an island by setting back the Uruguay into the Paraná, across their narrow isthmus. The Mesopotamia of the Argentines can offer nothing but its opulence to this nation. Babel, Babylon, and Baghdad, which constitute the glory of the true Mesopotamia, are wanting; there will be cities, warehouses, immense herds, huge shambles, and magnificent quays along two streams, but centuries must elapse before this land will be loved not for what *is* but for what *was*.

El Gran Chaco. — El Gran Chaco is a broad tract in the Argentine Republic, Paraguay, and Bolivia, but the Argentines have by far the greatest share of it: they possess all the southern Chaco, north of the Río Salado and south of the Río Bermejo,¹ and all the Llanos de Manzo stretching between the Bermejo and the Pilcomayo; the northern Chaco is divided between the Paraguayans and Bolivians. Chaco is a Guaraní word, which signifies an uninhabited country but one abounding in game — a place for great hunts. This extensive tract stretches away in perfectly level plains, with extravasated ríos in the rainy season, with brackish lagoons, forests where the jaguar roams, steppes, savannas, sterile sands, clusters of palms, mimosa woods, shrubs, and cacti. European towns are already springing up in this waste, which will ere long teem with life, among the decadent tribes of *Indios bravos*.

The Salado, the Bermejo, and the Pilcomayo, long ríos of the Chaco, are narrow and scant. They flow over impervious soils and in the winter season spread out in a kind of shallow sea; the rain which falls in their basins runs off or evaporates, but it never collects as springs in subterranean caverns. The Salado, whose name indicates that the waters are saline, and the Bermejo rise in the lofty Andean mountains which cover the two provinces of Jujuy and Salta (regions which are or will be a "garden of South America"), as well as the neighboring province of Tucumán, the cradle of independence.² The Salado reaches the Paraná near Santa Fé; the Bermejo empties into the Paraguay; the Pilcomayo, which rises in the land of the Bolivian Quichuas and which receives its name of Píscu-Mayu (River of the Birds) from them, also falls into the Paraguay. The Paraguay starts in a sierra which has neither

¹ The Argentines write Bermejo rather than Vermejo, as Córdoba instead of Cordova.

² It was at Tucumán that the independence of the country of the Plata was declared (1816).

vast snow-fields nor abundant rains, although it is from 16,000 to 20,000 feet high; after issuing from the mountains, it is fed by few fountains or rivers; it spreads out, and is absorbed by lagoons, swamps, woods, the plants, and the sun; when it enters the Paraná above Assumption it is only 165 feet broad; its course is so sinuous that it has been called a "liquid corkscrew."

The Pampas and Patagonia. — Pampa means the plain, in the Quichua tongue.



AN ISLAND AT THE MOUTH OF THE PARANÁ.

This region is, in fact, a plain, beautiful in its vastness, but desolate, parched, arid, and, since it is about to be put under cultivation, doomed to all the unsightliness of Beauce, the two Castiles, Estremadura, certain plateaus of the Atlas Mountains, and, in a word, of all great grain districts. It is another Chaco, though the climate is not as hot, there is less moisture and fewer woods, and the rivers, which are weaker, do not all reach the ocean, but sink into the ground. They were much stronger formerly, and united in one mighty current, which flowed to the Colorado, a tributary of the Atlantic: this once powerful current to-day bears the melancholy name of Salado, the Saline, or the Brackish, that is to say, also, an indigent, sluggish *wady*, disappearing

in pools and by percolation; this *wady* terminates, except during the heavy rains, in a *bebedero*, or evaporating lagoon.

What is there to be seen in the northern Pampas? *Lauquen*,¹ known as *esteros*, *bañados*, and *carrizales*, — all stagnant waters drained by the sun, — saline marshes, *medanos* or dunes shifting with the wind, thorny plants, thistles of European origin, and pastures which are but little revived by the rain, but which are nevertheless so vast as to support many millions of sheep. Toward the south the Argentine desert takes on a little freshness; it becomes an expanse of herbage where the traveller is forever changing the centre of the same horizon. At long intervals, an *estancia* (château, farm-house, cow-pen, stable, and *haras*) gives shelter to the herds of horses, cattle, and sheep that constitute the wealth of the Argentine Republic,² and to their Hispano-Indian tenders, the Gauchos.

The term Gauchos is derived from the Araucanian *gatchu*, signifying comrade. These mounted herdsmen, who are fully as skilled riders as the Magyars, gallop over the broad South American Puszta, which is as dry near its enormous stream as the Hungarian Puszta is between the Danube and the Tisza. These men love the Pampa, but the Pampa is far from attractive. It has no shade, the dusty horseman cannot quench his thirst in its brackish springs, and its rios offer him no refreshment; whatever warm zephyrs a sky so southern may promise, it is always a cold, dry, harsh wind that whistles over the moor. This rude nature has produced a violent people. The Pampeans are morose like their Pampa, hardy like their horses, and sparing of speech as though the wind cut the words in their throats; they are fond of alcoholic drinks, owing to the absence of pure springs, and of meat, owing to the lack of fruits and grain. And slaughtering the animals engenders a fondness for carnage.

Crossing the Colorado, a swift river flowing between sandstone cliffs, and destitute of affluents after it quits the cordillera, we pass from the Pampas into Patagonia, another singularly rugged and bare plain, a plateau supported on sandstone walls, where the cold is extremely harsh, and the winds are icy, spiteful, and blasting. Here and there, at long distances, torrents springing from beautiful Andean lakes have cut valleys for themselves, forming oases covered with willows and other trees, and having an alluvial soil that is submerged every year by the melted snows or by the copious rains. Once out of their lacustral mountains, the Patagonian rivers receive no tributaries. Such are the superb Rio Negro, the "Patagonian Rhine," which is the most northern after the Colorado, and which issues, under the name of Limay, from the charming Nahuel-Huapi Lake, or Tiger Lake; the Chubut; the impetuous Santa Cruz, fed by a remarkable cluster of mountain-lakes — San Martin, Viedma, and Lago Argentino; and, lastly, the Gallegos, very near the Strait of Magellan.

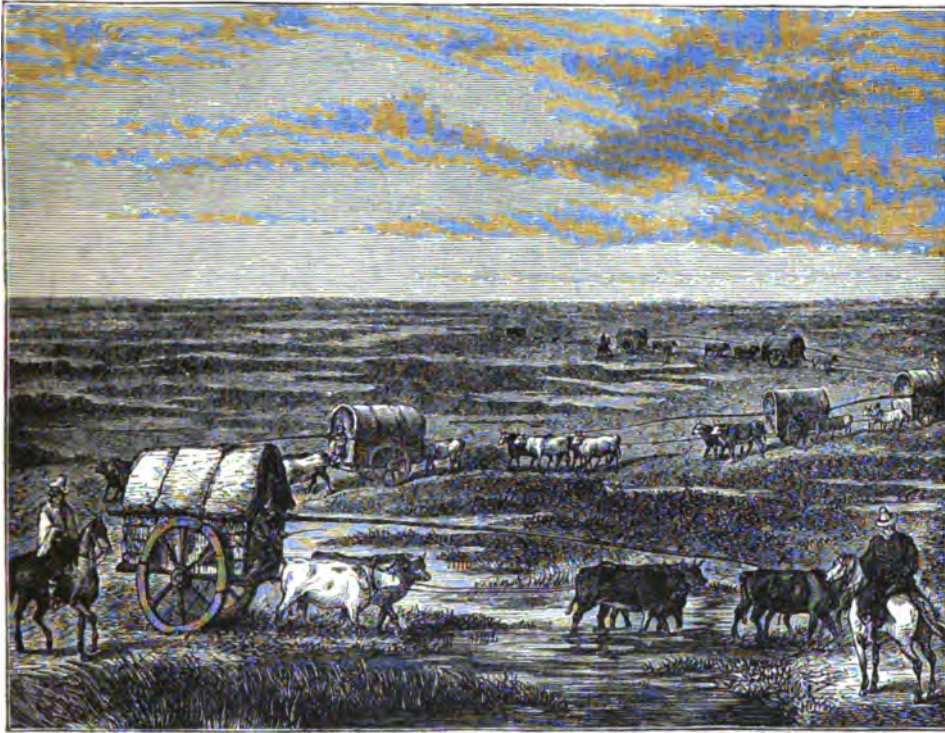
Patagonia, on the broad eastern slope of the Andes, is deplorably destitute of rain, while Chili, occupying the narrow western declivity, seldom emerges from under the trickling clouds and dripping fogs. If southern Chili is nearly valueless for lack of land, the Pampa of Patagonia is worth still less on account of the scarcity of water. It is almost uninhabitable except in the valleys and on the shores; the *pampero*, or wind of the plain, and the harsh gales from the Cordillera shake nothing but bushes and thorns here. They aid or impede the southern ostrich in his course across

¹ The Indian name for the lagoons of the Pampas.

² In the single province of Buenos Ayres there are 70 million sheep and 7 million cattle.

the waste, and the nandu, swift as an arrow; they make the Indians shiver under their coverings of skins.

These Indians of the icy steppe number about 20,000 in all; they are of a reddish brown color, and are more or less closely allied to the Araucanians; they are known under the names of Cheuches, Puelches, etc. Some of their tribes surpass in size every other nation of the world; giants are common among them, and under-sized men are extremely rare; a trailing garment made of skins often adds in appearance



A CARAVAN IN THE PAMPAS.

to their stature. They do not, however, merit their name of Patagonians, which signifies Big-feet; on the contrary, they have very delicate feet and hands.

The Argentines: Immigration of the European Meridionala.—The Argentine Republic embraces $\frac{1}{10}$ of the extra-tropical zone of South America. Lying in such latitudes, it is accessible to Europeans, especially to those of the south, where the climate resembles that of the centre of this republic. From 100,000 to 150,000 immigrants often debark yearly at Buenos Ayres, and sometimes as many as 250,000.¹ A half, or two-thirds, and perhaps three-fourths of these, or even more, come from Italy; the others are chiefly from Castilian, Catalan, Galician, or Basque Spain, or from the south-west and south of France; then follow Swiss, Germans, Irish, etc. The provinces to which preference is given are Buenos Ayres, Santa Fé, Cordoba, Entre Rios, and Corrientes. The flood will soon reach the other states and then overflow into the

¹ The total immigration to the Argentine Republic from 1869 (the date of the last general census) to 1888, inclusive, was 1,279,959. In 1889 it amounted to 289,014. — Ed.

frontier districts, and the Plata estuary will be to a great part of the so-called Latin America what the shores of Massachusetts and Virginia were to the so-called Anglo-Saxon America.

In the provinces which have been transformed by the southern Europeans, white blood predominates very largely, notwithstanding early intermarriages of Whites and aborigines; in the others the population is Hispano-Indian or pure Indian. In numerous Andean valleys of the north-west and in sections of the provinces of Santiago, Jujuy, Salta, and Catamarca, the Quichua idiom still prevails, and Guarani in a part of the province of Corrientes. Castilian is spoken everywhere else. The Negro element had a very small part in the formation of the Argentine nationality, since the climate did not necessitate the importation of slave hands, as in the tropical or equatorial regions. The Charruas, Indians of much larger stature, on the average, than the Europeans are, lived between the Paraguay and the Uruguay; they had black skins. They are now extinct, but the annihilation of this single tribe cost, says a historian, more Spanish blood than the combined armies of Montezuma and the Yncas. At the beginning of the present century the Charruas were already reduced to a few hundred, and their final combat occurred in 1831. Several of the survivors were bought by a showman; they were exhibited at fairs, and were doubtless jeered at as counterfeit savages; one of them, the last perhaps of his race, died at a hospital in Paris, on quitting a mountebank's booth.

Buenos Ayres. — Buenos Ayres lies on the right bank of the Plata estuary, which has a breadth here of 30 miles; it is a checker-board with squares of houses erected along streets which run parallel or perpendicular to each other; it is a busy industrial and commercial metropolis, the New Orleans of South America. If, like the great city of the lower Mississippi, or like Rio de Janeiro, it now fears the yearly visitation of yellow fever, it is the fault of its inhabitants: the soil and climate are both healthful, but the streets are not yet kept absolutely clean, and the sun here pardons no impurities in a city. The harbor does not admit large ships, and vessels drawing ten feet of water anchor six miles offshore. Buenos Ayres aspires to become a queen of the world; the 450,000 inhabitants make it already the chief city of Latin America. In four or five years it will outrank Madrid, and it will then be the first of all Spanish cities.¹

The Falkland Islands. — Opposite the Patagonian coast, and almost on a line with the eastern entrance to the Strait of Magellan, 300 miles out to sea, is a group of islands belonging to England: these are the Falklands of the English, the Malouines of the French. The archipelago is cut by the 52d parallel of latitude; its climate is moist and healthful, resembling that of Devonshire, Brittany, or Cotentin. It embraces something over 6000 square miles, in 190 islands, with 1800 inhabitants. East Falkland and West Falkland, the principal islands, have low mountains reaching an elevation of 2316 feet (Mount Adam), savory pasturage, extensive peat-bogs, and deep fiords. The winds are constant and violent, but they bend no trees, for there is nothing but grass and peat in the archipelago. The capital, Stanley, is still only a hamlet.

¹ The population of Buenos Ayres in 1886 was 460,000. That of Madrid (including suburbs) was 508,406 in 1885. — Ed.

URUGUAY, OR BANDA ORIENTAL DEL URUGUAY.

Uruguay. — **Herds and Slaughter-houses.** — Banda Oriental del Uruguay has scarcely 600,000¹ inhabitants on about 72,200 square miles. Banda Oriental signifies eastern margin, that is, eastern in relation to the Argentine Republic and to Buenos Ayres, which was formerly the residence of the viceroys of the country of the Plata. If the Portuguese had ruled on the right bank of the great estuary, they might have named the country on the left bank *Alempata*,² as they called the region stretching on the left of the Tagus Alemejejo.

Crowded, and, as it were, twisted, between the Atlantic, the Plata estuary, the huge river which gives it its other name of Uruguay, and the mighty Brazilian republic, the Banda Oriental sends the greater part of its rios to the Uruguay; the Rio Negro, the most beautiful of all these streams, is the central current of the country. Above their confluence, the Uruguay and the Rio Negro both border the Hens' Corner,³ or the peninsula of Fray Bentos; this peninsula contains some of the most extensive slaughter-houses in the world. Like the Argentine Republic and southern Brazil, the Banda Oriental supplies millions of cattle and sheep for colossal shambles; these animals are fattened in the estancias, and then butchered for the tallow, skin, and wool, and for beef-extracts.

The culminating peaks of the mountains of Uruguay are not far from the boundaries of Rio Grande do Sul, near the sources of the lovely Tucuembo, a tributary of the Rio Negro, in a district which the crops and mines will one day make the richest of the Banda Oriental. But even here they do not reach an altitude of 3300 feet; in the west and south, they sink to charming hills, at the foot of which magnificent rivers pass on their way to the Uruguay. The latter, which is the largest of the eastern rios, encounters its master, the Paraná, in front of the granitic island of Martin Garcia, which is the key to the Paraná and the Uruguay.

The Orientals and the Gringos. — If concord alone can save the Serbs (this is a saying of the lower Danube), discord may ruin the "Orientals." Their little country, terminated on the east by the Atlantic, and on the south by the gulf of the Rio de la Plata, supports on the west and north the weight of two nations which will some day become excessively heavy. The western, the Argentine Republic, is sixteen times more vast than itself and five times more populous; the northern, Brazil, has forty-five times as much territory and twenty-five times as many inhabitants. The Argentines can lay claim to the Banda Oriental by virtue of historic memories, community of race, and identity of language (for Castilian is spoken equally on both banks of the estuary); the Brazilians can urge that the north is peopled by men who have crossed the frontier, and who use Portuguese much more than Spanish. The inhabitants of Brazil have long dreamed of the Plata as their natural boundary. They have already once possessed Uruguay.

Of the 600,000 Orientals, about 180,000 are *Gringos* or foreigners, and 420,000 *Hijos del pais* or Sons of the country; but these figures do not give the true proportions, for all the sons of foreigners born on "Oriental" soil are ranked among the

¹ Certain documents give the population at 650,000 and even 700,000. See page 697.

² Beyond the Plata.

³ In Spanish, *Rincon de las Gallinas*.

Hijos del pais. In reality, the Europeans predominate,¹ and, as in the Argentine Republic, these are nearly all Spaniards, Italians, and French. Many of the Spaniards come from the Basque provinces; a great number of the French, likewise, are from the land of the Escualdunacs, or from the neighboring district of Béarn. The Indians have entirely disappeared from Uruguay; the Roman Catholic religion is professed and Spanish is spoken everywhere except in the northern departments which border on Rio Grande do Sul: there the language is Portuguese.

Montevideo, the capital, contains 75,000 inhabitants, and more than 130,000 with the suburbs; it is built in the form of an amphitheatre on the northern shore of the Rio de la Plata, 110 miles east of Buenos Ayres.

PARAGUAY.

Paraguay, the Paraguayans, their Language. — Before Bolivia lost Atacama, Paraguay was the only South American country having no frontage on the sea; but its navigable river connected it for a long distance with the ocean. Conquered like Bolivia, and much more thoroughly so, in a struggle against the two colossi, — the Argentine Republic and Brazil, — it still retains what the two countries combined cannot wrest from it, namely, its race and its language, its mournful souvenirs, the memory of blood spilled even unto death, and the longing, if not the hope, for vengeance; but it is so broken that nothing can rally it at present, so completely disarmed that it would be defenceless if attacked, so small that the weight of its enemies is crushing it. It embraces less than 92,000 square miles, while Brazil and the Argentine Republic cover nearly 4,380,000, or forty-seven times as much.

Paraguay comprises two regions, Paraguay proper, between the Paraguay and the Paraná rivers, and the east of El Gran Chaco (still uninhabited), between the Paraguay and the Pilcomayo. Such as it is, the country is bounded on the west and south by the Argentine Republic, on the north by the Chaco of Bolivia and the Brazilian state of Matto-Grosso, and on the east by Paraná, another state of Brazil.

The Paraguay river is easily navigable the whole length of the territory. The Paraná, which is ten times more powerful, admits vessels of heavy burden to the lower part of its waters, as far as a point 125 miles above its confluence with the Paraguay: here the first obstacle is the rapids of Apipe; farther on, the Salto Chico, or Little Fall, is encountered, and, under the 24th parallel, the Salto Grande of Guayra or of the Siete Caidas² (the Seven Cataracts), where the river descends 56 feet. The scenery varies from north to south in Paraguay, but the soil is everywhere fruitful and the tropical climate is agreeable and healthful. In the north (and on the water-parting between the Paraguay and the Paraná) rise mountains that are neither frowning nor snow-capped, and which rarely surpass 3500 to 5000 feet. In the south, plains predominate; they support *cerros* or isolated cones covered with trees, they

¹ The population of Uruguay in 1888 was estimated at 711,700. Of the total number of inhabitants 75.64 per cent are ranked as natives; of the foreign population 7.06 per cent are Spaniards; 6.61, Italians; 3.98, Brazilians; 3.02, Argentines; 2.72, French; and 0.49 English. The natives, though classed as Whites in the table on page 697, are in fact largely of mixed race. — Ed.

² Siete Caidas is the Spanish name; Sete Quedas, the Portuguese.

send streams into esteros and bañados, that is, into the lagoons and marshes along the Paraguay and the Paraná.

Before the war of the Triple Alliance,¹ the Paraguayans were an extraordinarily thriving people. It is, of course, impossible to credit the fabulous figures which represent the nation as multiplying fourteen times in 60 years without any external aid. In 1857 a pretended census returned 1,350,000 Paraguayans on territory which could have contained scarce 100,000 inhabitants in 1797. There is an obvious error in one or both of these numbers, for such an increase is absolutely impossible except with outside re-enforcements; and during these sixty years Paraguay was as completely closed to the world as Japan, China, and Korea. The Paraguayans are Roman Catholics, with Spanish for their official tongue; there is little else of the European about them. The Conquistadores had nothing to do with a country where there were no gold or silver mines, and which did not possess the Fountain of Youth; therefore only a few drops of Castilian and Flemish blood were poured into the Paraguayan stock, and that little soon disappeared. The features of these Guaranis remained Guarani. They resemble the Chinese to a considerable degree, and are mostly thick-set and short-legged; they are of a yellowish hue bordering on red, and their faces are devoid of all nobility of cast or expression. The language which was in use on the arrival of the Spaniards has preserved its vocabulary and its forms, having escaped more completely than any other the influences which have wiped out so many Indian dialects even to their very names. Outside of the official domain, the Paraguayans speak nothing but their old Guarani, which is also employed by many Indians and Half-breeds in the frontier districts of Brazil and the Argentine Republic.

The Paraguayans are, then, a wholly distinct people. They join to the gentleness of a childish soul a plasticity which permitted them to be moulded like wax by the Jesuit fathers, and later by the dictators; the unprecedented courage which nearly won for them the victory over the combined forces of Rio de Janeiro, Buenos Ayres, and Montevideo, was only a mighty sacrifice. No nation known to history has shed more blood for independence. The story will go down to all future generations. After the war a half or three-quarters of the Paraguayans lay under the sod of their native land, having died by fire, hunger, and fever, some in battle, others from the miseries incident on the wholesale emigration conducted by the dictator Lopez, who cleared the country before the advance of the enemy, from the banks of the Paraguay to the crest of the central Cordillera, — burning villages and hamlets, and firing on his laggards. And the country was lost. Wretched war! The Guaranis of Paraguay did not seem destined for such speedy effacement. They are reduced to-day to 329,774 souls,² the smaller part of whom are males, for nearly all the masculine portion of the people perished under the terrible Lopez.

The capital, Assumption (Spanish, *Asuncion*), is a city of 25,000 souls, built along sandy streets; it borders the Paraguay, — which is here from 1950 to 6550 feet broad, — at an elevation of only 253 feet, although several leagues from the sea.

¹ The Banda Oriental took part in the war of the Argentine Republic and Brazil against Paraguay.

² Not including the half-savage or wholly wild Indians, who are estimated at 130,000. See page 697.

BRAZIL.

Size of Brazil. — Origin of the Name. — Beginnings of the Country. — The marvelous republic of Brazil touches all the South American States except Chili. It is bounded by the Atlantic along about 4000 miles, or one-half of its immense circuit; on the other half it borders French Guiana, Dutch Guiana, British Guiana, Venezuela, Colombia, Ecuador, Peru, Bolivia, Paraguay, the Argentine Republic, and the Banda Oriental. Its area of 3,219,000 square miles is about 93 times that of the mother-country, Portugal. And though there are at present only about 14 million Brazilians,¹ they may one day number 500 million or perhaps a billion, — stupendous future for the Lusitanian people!

The word Brazil comes from the same root as the French word *braise* (embers): the land which was first called the Island of Vera Cruz, and then Santa Cruz, by the Portuguese, who had taken possession of it for the king of Portugal, soon received the name of Brazil from a reddish wood brought into Portugal by the early explorers. This shore was first descried in 1499, by Vincent Yañez Pinçon, who took possession of the country in the name of the Spanish government. In 1500, the Portuguese commander, Alvarez Cabral, discovered and explored a strip of sea-coast here, and declared the country an apanage of Portugal; later on, the streams were ascended, war was made against the Indians, and numerous tribes were mercilessly hunted down and massacred. Those who were spared by the sword became the baptized slaves of their oppressors; when they were no longer adequate for the work, Negroes were imported to wash the sand and alluvia for diamonds, to search for gold and cultivate the land. Such were the beginnings of the magnificent country which the Dutch disputed for some time with the Lusitanians, and which had been claimed earlier still by the French, who were the first founders of Rio de Janeiro.

Temperate Brazil. — Amazonian Brazil. — Brazil embraces two physical regions, which have only one feature in common, namely, the luxuriance of the forests. The southern and central region, less exuberant in vegetation, but better suited to the habitation of the white man, is the one of the two which can be said to be peopled and civilized — the one which receives immigrants from across the sea by thousands or tens of thousands. This is European Brazil; the other is rather Indian and Negro; here mountains rise, and between the serras are undulating plateaus which are cool, on account of their altitude, only a few leagues away from valleys and shores overhung by an oppressive heat. This temperate Brazil is cut into two sections by the tropic of Capricorn: on the south, the three provinces² of Rio Grande do Sul, — which borders Uruguay and the Argentine Mesopotamia, — Santa Catharina, on the coast, and Paraná, which touches Paraguay, and the southern part of the province of São Paulo, belong to the temperate zone both by their latitude and altitude; north of the tropic of Capricorn, the north of São Paulo, Rio de Janeiro, Minas-Geraes, Bahia, Goyaz, and Matto-Grosso are moderate in climate because of the altitude of their plateaus and their serras.

North of temperate Brazil stretches the other half of the republic, the tropical or Amazonian Brazil. The white man languishes here, but vegetation, on the contrary, is triumphant. There is not a more luxuriant region on the planet than the Selvas of

¹ See pages 697 and 800.

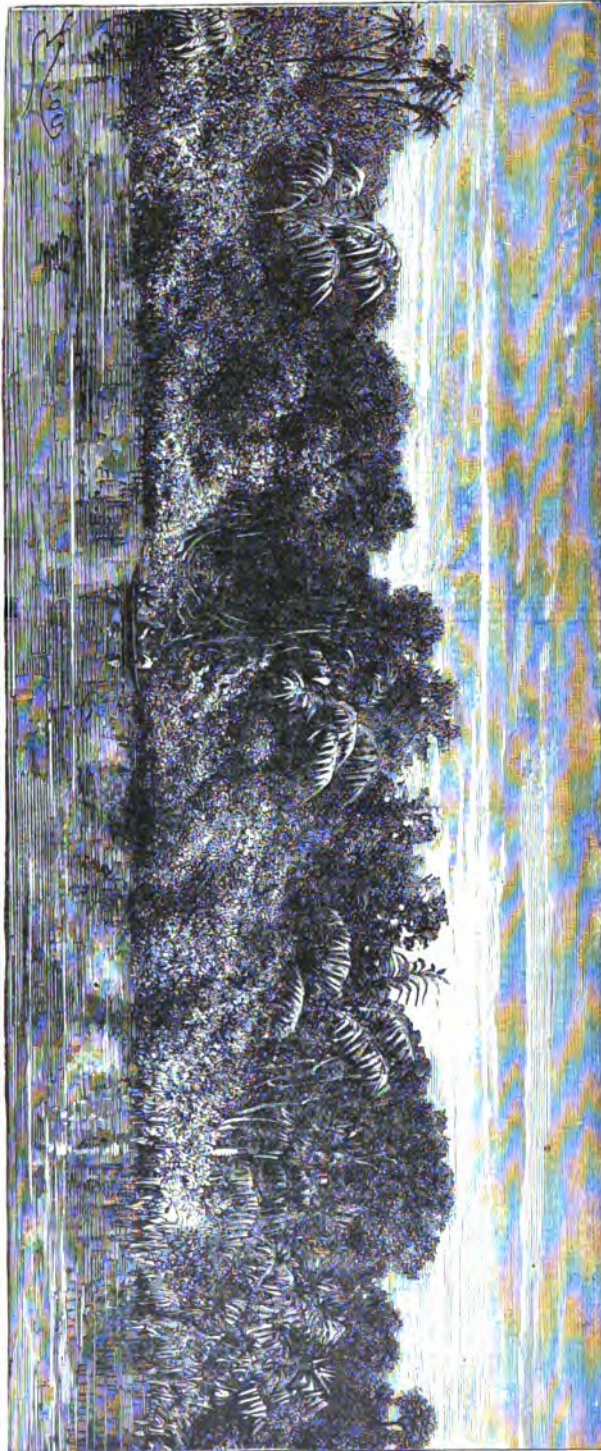
² Under the Republic the provinces have become states.

the Amazon, in which the living cord of the tropical bindweed hugs the lithe trees and creeps from branch to branch across rio, *igarapé*, and pool, over the entire forest; but all this opulent nature knows neither masters nor admirers. The only inhabitants of equatorial Brazil are *insouciant* Negroes, apathetic Indians, and Whites or half-Whites who are wholly devoid of aggressive energy.

Serras. — Campos. —

Sertão. — The Brazilian mountains nowhere surpass an elevation of 10,000 feet, which is not even a half of the altitude of the Cordilleras. They are entirely unconnected with the Andes. Their chains, running parallel to the Atlantic, the cross ranges, the plateaus, or campos, which they support, their winding valleys, their cirques, and the chasms by which they are cut and sundered, make up a world covering 1,062,000 square miles. In general, the loftiest summits are only a short distance from the ocean; more than one faces the gleaming shore of Rio de Janeiro. Some rise in the Serra do Mar, or Chain of the Sea, which is most appropriately named, for its peaks contemplate the Atlantic, across the hot plantations, glistening gardens, and lazy towns of the *Beira*

VEGETATION ON THE LOWER AMAZON.



mar (shore). In many places one can climb in a few hours from the fringe of the waves to the crest of the Serra do Mar, from which streams can be seen flowing off toward the west to meet the Paraná, which does not reach the ocean until hundreds of miles farther away: so many a rill which might enter the sea after a course of a few leagues prefers to be absorbed into the Paraná, to advance with it into the interior of the continent, separate Brazil from Paraguay and spread out as an estuary before Buenos Ayres and Montevideo. A peak in the Serra dos Orgãos, in sight of Rio, reaches an elevation of 6611 feet; in the Serra da Mantiqueira, west of the metropolis, one of the summits, the Pico do Itatiaiossú, rises 9823 feet; this altitude is, however, contested, some authorities making it a little higher, others putting it at 8898 feet. This peak is perhaps the culminating point of Brazil; if it is not, the honor belongs to a summit of the Montes Pyreneos (9620 feet [?]), in the province of Goyaz. Itatiaiossú, or the "Great Flaming Rock," must have once been a volcano; snow falls every year on its three tops, — the Black Needles, — but it rarely lasts more than a fortnight.

Diamonds, — inferior in quality, it is true, to those of India, — gold, all the metals, and all the precious stones, either vein the flanks of these mountains or are hidden in the alluvia of their rivers. Had it not been for the mines, which attracted Portuguese adventurers into the country, and for which countless Negroes were imported, there would be few inhabitants of European stock in Brazil, Blacks would be rare, and in place of the Lusitanian republic we should see on the campos to-day Guarani states similar to Paraguay. The chief wealth of Brazil at present is not in the rock of the serras and the mud and gravel of the rios: it is in the campos, which are still clad with forests or covered with a malodorous grass called *capim gordoso*; it is in the *fazendas* or farms which are taking the place of the savannas and the virgin woods, and on which are grown grass, tobacco, coffee, cotton, sugar-cane, cereals, maize, rice, medicinal or tinctorial plants — in short, everything that Hot Lands and Temperate Lands can produce. But beyond the less torrid southern plateaus, what a struggle goes on against a nature so active that its outbursts of mid-day heat, of nightly cold, of drought, of humidity, and of electricity, rapidly crumble granite, gneiss, basalt, limestone, chalk, and itacolumite!¹ On some of the Brazilian railroads it has been necessary to face the granite itself with bricks in order to prevent it from falling in pieces and filling up the cuts. It is rare that towns are destroyed here by earthquakes, but with what difficulty the roads are laid out, what care is required to keep them in order, as well as to save the bridges over many of the streams, for rain falls in torrents during six months in the year! In most of the Brazilian mountains it storms continually: in São Paulo and Paraná, and in general in the Beira mar, a rainless day is almost as rare as a rainy day is on certain portions of the Pacific coast of South America. When the sun reappears in all its glory after the deluge, the causeways, their culverts and bridges are floating off toward the Atlantic with the miry floods. This excessive and perpetual humidity, the heavy heat, the long droughts, the festering waters spread out far and wide over the campo, are almost sure death to the planter who has not chosen some high situation where the air is purified by the winds. And even if he selects his abode wisely, adversaries still lie in wait for him. As soon as the *picada* (pathway) running from his dwelling reaches the forest, the settler penetrates with it into the lair of his foes: there prowls the *onça* (jaguar), which takes

¹ This is a sandstone which derives its name from a peak of the Serra dos Vertentes, and which occupies hundreds of thousands of square miles in Brazil.

his tithe from the herds of the fazenda; in the branches of the trees the bearded monkeys that pillage the corn-fields gambol, accompanying their movements with howls half-furious, half-sarcastic; venomous serpents, such as the *jararaca* and the *surucucu*, enormous reptiles, like the boa, glide over the elastic mould, fallen lianas, and dead leaves of the forest; in the sod are thriving republics of ants, which sometimes drive



JAGUAR AND SNAKE.

the fazendeiro from his fazenda; and the *jacaré*, or Brazilian alligator, flounders in the mud of the rios.

Nevertheless, the *sertão* is gradually being invaded and conquered, even in the warm, mouldy valleys where the water and the air distil poisons — the *sertão*, that is to say, the “distant land,” the “interior,” — the wild wood, the refuge of beasts, the home of the slowly Lusitanianizing Indian. Whether it be a wet or a dry *sertão*, — *catinga*,¹ *agreste*, or by whatever name called, — whether it stretch out in campos or *mattas*,² Brazilians, Portuguese, and Italians — aided by Germans in the southern provinces, — have declared war against it. Usually, two kinds of campos are distin-

¹ So called from a tree.

² Or *matta*, “wood.”

guished — the *cerrados* and the *abertos*: *cerrados* (leafy) when they are wooded; *abertos* (open) when they bear nothing but bushes and grass.

The Paraná and Uruguay: Southern Provinces. — A half of the Brazilian republic belongs to the basin of the Amazon, a quarter to the basin of the Plata, and the other quarter to the São Francisco and the small coast streams. The thousand rivers of temperate Brazil are all absorbed by five great currents: three of these, the Paraná, Uruguay, and Paraguay, have a southerly course; two, the Tocantins and the São Francisco, flow north; two, the Paraná and the São Francisco, empty into the sea; the other three pour into other rivers, — that is, unless we consider the Tocantins as itself a great stream running to the ocean.

The Paraná derives its head-waters from the peaks of a serra near Rio de Janeiro, in the province of Minas-Geraes; but instead of making a journey of a few hours to the shores of this favored province, it takes an opposite route, first west, then south, and reaches the ocean through the Plata estuary, after a course of 2300 miles. One of the parent rios descends from Itatiaiossú — making the second of the Brazilian streams issuing from the principal mountain of Brazil. The mother branch is called the Rio Grande. The Paranahyba, the Tiete, and the Paranapanema are affluents almost as large as the Rio Grande, and when the Paraná becomes a boundary line between the vast country and Paraguay, it is a powerful current, which is said (very incorrectly) to have a greater volume than all the streams of Europe together. A few leagues above the spot where it first comes in contact with the little republic of the Guaranis, it contracts from 13,000 feet to 200, then plunges 56, not in a cataract but in a raging rapid, down an incline of 60 degrees: it is a mightier though less limpid Imatra, called the Salto Grande, or Great Cataract, the Salto de Maracayú or Salto de Guayra, and oftenest the Seven Falls. Another salto in the same region is said to be even more imposing. It is farther down on the Yguazu: this magnificent tributary, which is divided by jagged rocks into about thirty arms, falls from 150 to 200 feet over a horseshoe-shaped cornice having an arc of two miles. The Paraná is navigable for the largest vessels in its lower course, in the bosom of the Argentine and Paraguayan plains; it is bordered with forests and savannas, and flows in one broad stream or in numerous channels. It enters the Plata estuary in company with the Uruguay.

The Uruguay, which is also broken by saltos, is a small Paraná, starting, like the greater, in a littoral serra. It flows first west, then south-west; two-thirds of its course lies through Brazil, where it envelopes Rio Grande do Sul, the most southern, the most temperate, and, down to the present time, the most widely colonized province in the country — and almost equalling Paraguay in area (91,280 square miles, against 91,970).

North of Rio Grande do Sul, and resembling it in agreeableness and healthfulness of climate (which naturally becomes somewhat warmer in measure as we go northward toward the equator), are three favored provinces; the relative coolness of the temperature here is due to the altitude of the surface and to the winds which blow from the south across the vast level expanse of Patagonia and the Pampas. These provinces are: Santa Catharina (28,500 sq. m.), which extends from the Uruguay to the Yguazu; Paraná (85,350 sq. m.), which stretches from the Yguazu to the Paranapanema; and São Paulo (113,000 sq. m.), lying between the Paranapanema and the upper Paraná, or the Rio Grande. These three divisions, with Minas-Geraes, which follows São Paulo on the north, constitute temperate Brazil, the climate of which is

suited to the European settler, and which is being more and more rapidly invaded by him, — especially by the Portuguese, the Italian, and, to a less degree, by the German.

The Paraguay : Matto-Grosso. — The Paraguay, the longest affluent of the Paraná, flows from the Campos dos Parecis, — plains so slightly broken that they do not always sharply divide the slope of the Plata from that of the Amazon : thus the Guapore, a branch of the Madeira, and the Jauru, a tributary of the Paraguay, originate in the centre of a level tract which the rainy season converts into a lagoon, and this lagoon is drained indifferently into either river. Again, there is not a distinctly marked separation between the flat campos inclining on the south toward the Pilcomayo, an affluent of the Paraguay, and on the north toward the Mamore, the princi-



HARVESTING COFFEE.

pal branch of the Madeira. Owing to the insignificant elevation of the water-parting between the two great South American slopes, the Paraguay must sooner or later become one of the chief highways of commerce for the half-continent ; moreover, it moves due south by the shortest route between the Amazon and Buenos Ayres. The Paraguay is swollen by rivers that carry diamonds in their waters, and these gems likewise roll in its own floods ; it meanders through *pantanales*, or meadows, which are so low that the high waters convert them into a marshy lake, covering hundreds or perhaps thousands of square miles — called the Lake of Xarayes.

The province of Matto-Grosso (the Great Wood), on the upper Paraguay, occupies the centre of South America. It is fruitful and vast, it has diamond mines and boundless forests ; but it is so far from the rio and so far from the sea that no European turns his steps thither. It contains scarcely as many inhabitants as an ordinary city, — about 80,000 persons on 532,800 square miles.

The Tocantins. — The São Francisco. — Minas-Geraes. — The powerful Tocantins is the principal rio of the extensive province of Goyaz (265,000 sq. m.; pop. 212,000). It is over 1400 miles long and very broad. Its course is broken by *cachoeiras* (falls or rapids), below which, as far as the Amazon, the depth of the water is sufficient to float ships. Its chief affluent, the Araguaya, nearly equals in size the most important streams of Europe. Though the Toncantins seems to belong to the basin of the Amazon, it is, in fact, an independent rio — one of the most abundant in the world; it has communication with the Amazon through the narrow channel of Tagiura.

The São Francisco has a length of 1800 miles and discharges 98,800 cubic feet of water per second into the sea in dry weather. Its mother branches, the São Francisco and the Rio das Velhas, both descend from the sandstone mountains and *chapadas*¹ of Minas-Geraes (General Mines); at their confluence the former carries 15,750, the latter 7380 cubic feet per second at low water. Minas-Geraes, which is an important mining province, is the heart of the Neo-Lusitanian country; its most productive diamond district is the elevated region of the Serro do Frio,² the chief city of which is called Tejuco; the river from which precious stones have been derived in the greatest abundance is the Jequitinhonha. It is estimated that a hundred thousand diamond-washers have perished in the diamond rios of Brazil, from sunstroke or from disease engendered by the putrid mud. Minas-Geraes, with an area of 237,000 square miles, supports on its lofty plateaus a vigorous race of about 3 million miners, cattle-breeders, herdsmen, and planters. Both the urban and the rural population is increasing here rapidly.

The São Francisco, while still a mere torrent in the mountains of Minas-Geraes, descends 666 feet at the Casca d'Anta; then above the Rio das Velhas it tosses noisily over its bed in the rapids of Pirapora. About 930 miles farther down, after having already traversed not only the whole of Minas-Geraes but also nearly the entire province of Bahia,³ it grows violent again, and then rushes furiously for a distance of 225 miles to the brink of the chasm of Paulo Alfonso. The São Francisco, which is larger than either the Rhine or the Rhone, contracts in seasons of extraordinary drought to a breadth of 50 feet; it enters five different clefts in the green sandstone rock, it descends 280 feet in three leaps of 30, 50, and 200 feet, — the muffled roar of which can be heard for 16 miles when the wind is favorable, — and even then its fury is not appeased; before it reaches the ocean it is broken 17 times more at the bottom of tortuous gorges which attain a depth of 820 feet. When the stream finally enters the sea, it has received the waters of a basin more than three times the size of New England, and containing a population of nearly 2 million souls, a sixth of whom are Brazilians.

The Amazon: the Rio Negro, the Madeira. — The rivers of temperate or half-temperate Brazil are all much inferior to the rio of equatorial Brazil, the Marañon or the Amazon. The Brazilians call the Amazon the Maranhão below the mouth of the Rio Negro, and the Rio de Solimões above. For the Indians it was, and is still, the Tunguragua, the Paranaguassu (Great Stream), and the Paranatinga (Royal Stream). A length of about 3750 miles;⁴ a breadth so great that often one bank is not visible from the other, and that the boatman in the middle of the stream sees around him nothing but water as far as the horizon; a width of 60 miles or even of 125 during the floods — which raise the waters 46 feet; a depth of 150 to 300 feet; a basin of

¹ Plateaus.² Cold Mountain.³ Bahia contains 1,655,000 inhabitants on nearly 165,000 square miles.⁴ Or 3550 at the least.

2,700,000 square miles; a low-water flow of 600,000 to 640,000 cubic feet per second, a mean discharge of 2,825,000, and a volume of 8,825,000 at the town of Obidos in an extraordinary rise of the waters,—a mighty deluge carried along by its own weight, for the gradient is so gentle as to be almost imperceptible;¹ an appreciable tide for 450 miles, or as far as this same Obidos, where the rio is only 5138 feet broad; 30,000 miles of navigable waters in its major channel, its *furos* or false branches,



A RAFT ON THE AMAZON.

its *igarapés*² or side-channels, its affluents and the tributaries and sub-tributaries of its affluents; *enchentes* or inundations of vast extent; 120 days of high water covering numberless islands and converting the embouchures of rivers of the size of the Rhone, the Danube, or the Volga into immense lakes; tributaries of every color,—sometimes blue, sometimes white like the milky Madeira, Yapura, or the Purus, sometimes gray like the Xingú, sometimes greenish like the Tocantins (the green of which borders on yellow) or like the Tapajos (where the green has a brownish tinge), sometimes of a dark amber like the Rio Negro, whose hue resembles the transparent

¹ Only 510 feet from the foot of the mountains to the sea, a distance of 2500 miles.

² Literally, canoe-paths.

brown of the rivers from the Canadian granite; destructive tempests; billows like those of the sea and currents as violent as on an ocean shore; three times as many different kinds of fish as are found in the Atlantic itself: with all this, the Amazon is indeed the true "Father of Waters."

The upper part of the Maranhão belongs to Peru, not to Brazil. Reaching Lusitanian territory at Tabatinga, the stream sprawls out around islands, in arms and false arms, in marshes and lagoons. Except for large bends, it moves directly east; as it runs near the equator (on the south), it has been called the visible equator. North as well as south, that is to say, on the left as on the right, the solemn, turbid rio skirts limitless forests where the trees, bound together by lianas, form double hangings of flexible stems, with palms which are sometimes 80 feet tall. These forests are the Selvas, the glory of Brazil, with rivers for roads, brooks for paths, and Indians and Whites in search of the India rubber-tree as the only visitants. The axe will soon open up their dim immensities to the sunlight—a destructive work. It is because the dome of the forest protects rios, igarapés, lakes, and lagoons,—stagnant waters, running waters, and the humid freshness of the soil,—it is because the forest guards the storage of the rains for the rainless season, that the Maranhão rolls an enormous sea, which in the great floods perhaps equals a fourth of the running waters of the world (?).

The selvas hug the Amazon so closely that cities and even hamlets are rare on its banks: below the mouth of the Rio Negro, 110 miles, on the average, separate the villages, and above this point they are fully 150 miles apart. There are only 407,000 inhabitants in Grão Pará (414,000 sq. m.)—on the lower Amazon, on the Tocantins, the Xingú and the Tapajos; and there are scarcely 80,000 in Alto Amazonas (753,000 sq. m.)—on the upper Amazon, the Madeira, the Rio Negro, and the Purus.

Two tributaries, the Rio Negro on the left bank and the Madeira on the right, nearly rival the Amazon itself in size. The Rio Negro, which the Indians call Curana, Black Water, is the powerful stream which receives the Cassiquiare, a branch of the Orinoco. Curana is not a misnomer, for its floods are of a deep brown hue; the childish peoples—those whom we class as savages—know how to describe by a name the brooks, mountains, and rocks, and all the features of the nature which encircles them with its severity or its grandeur. At its confluence with the Rio de Solimões, near Manaus or Barra do Rio Negro, its coffee-colored though clear waters arrive calmly and slowly opposite the muddy stream, which springs upon them, shakes them, twists them, and penetrates them. The contrast between the rage of the Solimões and the listlessness of the Rio Negro is so marked that the Indians of Manaus call one the Living River, the other the Dead River. When the enchente is at its culminating point, the Curana rises 43 feet and inundates the surrounding country for long distances. The Maranhão and its other tributaries reach a similar height during the rains—only, the affluents of the left bank rise when those of the right fall, and *vice versa*; this is one of the reasons for the enormous discharge of the river at all seasons.

The Madeira, which terminates at some little distance below the Rio Negro, descends from the Bolivian sierras into the plain of the selvas by a succession of rapids and falls of slight altitude (a descent of 226 feet in a length of 230 miles). Farther on, the Tapajos mingles its greenish brown floods with the ashy gray of the Amazon; here, as always happens when rivers of different hues meet in a common channel, a battle is engaged in,—and the same struggle goes on that has already

taken place higher up between the Madeira and the Amazon, and higher still between the Rio Negro and the Solimões. The Tapajos encounters the great stream near Santarem, a Portuguese name recalling that of the city on the Tagus: the Lusitano-Americans have strewn the Brazilian country with names of Portuguese cities.

After having bathed the hills of Almeirim and the Serra de Eréré, the Maranhão receives the Xingú. The serras of Almeirim and Eréré are only 800 to 1000 feet in elevation, but, rising as they do from vast plains, they possess all the majesty of mountains. The gulf at the mouth of the Amazon is cut into two parts by the large island of Marajo; here the tidal phenomenon known as the *pororóca*, or bore, occurs about the time of the full moon, when the water of the ocean rushes into the river in three successive waves 12 to 15 feet high. The Amazon does not terminate, like the Mississippi, the Rhone, or the Nile, in a delta, but its alluvia are carried off by a current toward Guiana. If it were not for this current, the deposits would build up a vast country at the mouth of the river.

Indians, Negroes, and Whites have been intricately mixed in Brazil. Even in South America, which is the home *par excellence* of cross-breeds, there is no other country inhabited by such an agglomeration of races. Half-castes of every name and every color are to be met in the Neo-Lusitanian republic



A MINA NEGRESS.

Whites. — A little more than a third¹ of the 14 million inhabitants of the country or something over 4,670,000, rank themselves among the Brancos or Whites: these divide naturally into Brasileiros and Europeos. The Brasileiros or Brazilians, many of whom are in reality more or less closely allied to the Indian race or to the Negro, are descendants of the Portuguese of Portugal and the islands. The Azores, Madeira, and the Cape Verde archipelago contain together hardly 515,000 souls, but they send out so many emigrants to Brazil that they have had a very large part in the formation of the Brazilian nationality. The first settlers of the region which later became Rio Grande do Sul and Santa Catharina, particularly, came from the Azores. A cer-

¹ See pages 697 and 800.

tain number of Jews and a few Bohemians arrived also with the continental or insular Portuguese, at the dawn of Brazilian history, more than three centuries ago. These were the better elements out of which the nation sprang. The remaining constituents were supplied from the Portuguese prisons, — even from those that were not to open until the day of final expiation, a royal decree having made Santa Cruz a refuge for all Lusitanian convicts, except those condemned for heresy, high treason and counterfeiting, or for crimes against nature. It was in this manner that the colonization of the enormous country was begun by the little *reino de noventa leguas*, or the kingdom of ninety leagues, as the Brazilians delight to call Portugal; they also name it derisively *Terrinha*, the very small country.

The Europeans or Europeans come first of all from Portugal, and for the last few years they have been arriving in great numbers from Italy; next in rank are the immigrants from Germany, then those from Spain (chiefly from Galicia), from France and England, and scattered representatives from every quarter of the habitable globe. It is principally the virile and hardy Portuguese who sustain Brazil; they find here their native tongue and customs, and the Brazilian climate is better suited to them than to other Europeans. A portion of them are, moreover, from the hot zone—from the Cape Verde Islands, Madeira, and the Azores; but the larger part arrive by way of Oporto from Entre-Douro-e-Minho, Trás-os-Montes, and Beira, that is, from northern Portugal. The number of Portuguese settling yearly in Brazil averages from ten to twelve thousand. The Brazilians find them clumsy, coarse, and rustic; they call them *pe-de-chumbo*, "leaden-foot," and they designate themselves, in opposition, *pe-de-cabra*, "goat's-foot." By another antithesis, the *Brazileiros* are *filhos da Terra*, "sons of the country," natives, and the Portuguese *filhos do Reino*, "sons of the Kingdom." The latter are also nicknamed *Marinheiros*, or seamen (those who come by the sea), and again, *Gallegos*, *Galicians*, or in other terms coarse, awkward countrymen; the *Galicians* are nevertheless honest, simple, faithful, and industrious.

However closely these two elements of the White race in Brazil may resemble each other, though making use of the same rich, poetical, nasal tongue, professing the same Roman Catholic religion, and possessing, at least on the paternal side, the same glorious ancestry, the Brazilians and Portuguese have no brotherly love for one another. Just as before the establishment of Brazilian independence the Lusitanians of Europe tyrannized over those of America, so since the day when Dom Pedro flung the famous cry of "*Independencia ou morte!*" to the echoes of the valley of Ypiranga (1822), the *filhos da Terra* have more than once made the *filhos do Reino* living in Brazil feel the weight of their injustice.

At present, the Italian immigration ranks next to the Lusitanian in importance, and comprises, like the Portuguese, about ten or twelve thousand persons per year; next comes the German, which began toward 1825 with a few families, and which has gradually increased until to-day it embraces two, three, or four thousand individuals annually¹: these are largely from Rhenish Prussia, Westphalia, and Pomerania, that is, from the provinces that laid the foundations of the "Little Germany of the Rio Grande." The Italian and German immigrants are mostly tillers of the soil, and they are establishing a peasantry and a bourgeoisie here in Brazil, where for long years

¹ The immigration to Brazil was 25,845 in 1882, 26,789 in 1883, and 17,999 in 1884. In 1886 there were 25,741 immigrants, of whom 11,582 were Italians, 6287 Portuguese, 2400 Germans, 11,319 Spaniards, etc., and in 1888 the number reached 131,268. — Ed.

the inhabitants consisted wholly of officers, soldiers, merchants, planters, miners, and slaves. In Rio Grande do Sul and the province of Santa Catharina, the German colonies only recently still constituted a little nation, a sort of state within the state. Certain writers have predicted that this small Teutonia would end by absorbing South America, or at least Brazil. But the fact is, and there is no arguing against it, the Italians are to-day invading the very provinces where the little Teutonic nation was shaping itself; they are coming as peasants and laborers in four times as great numbers as are the Germans; they are as prolific as the latter, and certainly they are better fitted to withstand whatever baneful effects may be produced by the rather hot climate of temperate Brazil; they are already crowding the German colonies, and they must surely stifle them in the end.

The German colonies have not flourished except in the southern provinces; everywhere else they have either succumbed to the climate and to the poisonous exhalations from the forests and marshes, or they have perished for want of aid and of the means of communication, and from the pressure of the wilderness, or they have fallen a prey to the greed of emigration companies and the bad faith of fazendeiros—great proprietors who are veritable feudal lords. A half of Brazil is said to be in the hands of six thousand fazendeiros, whose vast estates, cultivated by slaves, stretch out over boundless campos. If it is true that there are only six thousand land-owners for a half of the country, each fazenda covers on the average 270 square miles; New England, divided in the same proportion, would be the property of about 240 landlords.

Negroes and Mulattoes.—The Blacks of Brazil are rated at 2½ million, of whom 1,133,000 were slaves in 1886. It is not many years ago that slavers landed 50,000 Negroes annually in the country. Except in the southern districts, where Whites can cultivate the soil with impunity, the Blacks are the willing or unwilling toilers of Brazil; they perform all the labor on the plantations, in the mines and diamond-washings, and in all the more menial crafts. The most athletic, the handsomest, and the most determined in their longings for liberty, are the Minas; these are natives of the west coast of Africa, and they are very numerous, especially in the province of Bahia; as long as they were re-enforced by the slave-trade, they often revolted; since the traffic has been stopped, they are gradually losing their traditions, but they retain a nobility of countenance not to be found among the Negroes descended from the inhabitants of the Mozambique coast.

A great deal of black blood has been infused into the nation. But though it has so penetrated the tissue of the Brazilian people that it can never be eradicated, though it is seemingly destined to form for a long time yet the vital element of the Lusitano-American, or, rather, the Lusitano-Negro, race, it is on the verge of a decline. Slavery received its death-blow in Brazil on the day that the laws declared every human creature born on the soil of Santa Cruz free, even though his father and mother were still in chains.¹ Blacks are no longer brought into the country, and the number of white immigrants is continually increasing, 20,000, 25,000, or 30,000 arriving annually, or a half of the Negro importation of former years. The Mulattoes, rated at about 4½ millions, form, like the Whites, nearly a third of the nation.

Indians, Mamelucos, Paulistas.—In 1500, when Alvarez Cabral landed on the

¹ A law passed in September, 1871, enacted that from that date every child born of slave parents should be free, and also declared all slaves belonging to the state or to the imperial household free at that time. In 1887 the official returns gave the slave population as 723,419. In May, 1888, slavery was abolished by law, without compensation to the owners. — Ed.

Porto Seguro coast, in the centre of the Brazilian seaboard, his first care, it is said, was to erect a stone cross. The Indians soon learned what this sign meant, and their arrows did not save them. Those who bowed the head to baptism perished in the hard service of their masters; those who revolted died under bullet and sword; those who fled behind the headlands of the forests gradually retreated before the Portuguese invaders, narrowing day by day their grounds for pillage, war, hunting, and fishing. Hospital blankets infected with small-pox carried destruction to tribes which had doubtless prided themselves for an instant on possessing this treacherous gift.¹ In these various ways peoples disappeared, effaced forever from the memory of their brother savages and of their Portuguese executioners. On the arrival of the Conquistadores, the dominant Indians were the Tupis, who belonged to the same race as the Guaranis; the rest were of the Tapuyo family. As in Spanish America, the Indians of Brazil are either pacific Indians, or *Indios bravos* called here *Indios do matto* (Indians of the wood), Cabôclos or coppers, and Bugres. On the Rio Mucury and in the wastes of Minas-Geraes the Botocudos still rove — hideous savages, who insert an enormous wooden disc in the lower lip; in Portuguese this piece of wood is called a *botoque* — whence their name. A hundred other tribes might be mentioned. According to the census of 1872, there were about 400,000 pacific Indians, and the wild Indians were estimated at a million.²

The intermarriage of the Tupis and the early Portuguese rovers gave birth to a race of merciless warriors and intrepid riders, who were named Mamelucos or Mamelukes, on account of their cruel raids on the Indians of Castilian territory; little by little this name came to be applied to all the White and Indian cross-breeds. The Mamelukes were valiant men; they explored, fought, and conquered to great distances along the banks of the swift rios which descend from their native plateau. It is chiefly due to them that tropical Lusitania is an immense country instead of a narrow strip of seaboard, instead of an American Portugal; it was their adventures, their razzias and conquests, which slowly carried Brazil toward the centre and south of the semi-continent, across plateaus and into valleys that seemed at first destined to fall to the Castilians or to remain in possession of the Guaraní Indians. However, these Mamelucos, who were not only Lusitanian but Spanish to some slight degree, by their fathers, destroyed as much as they discovered; they slaughtered more men than their descendants number down to the present day, and yet the most favored regions of Brazil are peopled by their posterity. These assassins and plunderers made a special business of hunting men: in about thirty months, from 1628 to 1630, they brought 60,000 Indians in shackles to the market of Rio de Janeiro.

The Paulistas, or people of São Paulo, who discovered so many mines, explored so many rivers, and founded so many cities, are mostly of Mameluke origin; like the Mineiros of Minas-Geraes, who likewise have a great deal of Mameluke blood in their veins, they excel the other Brazilians in vigor, activity, courage, and endurance; they emigrate in small bands to all parts of Brazil.

The Black and Indian half-castes here are called Cafuzos; the name Zambos is given to them in Spanish America.

Languages. — All these men of various origins and divers colors, confusedly crossed and continually mixing, possess the double bond of a common religion and a

¹ This is the tradition.

² The statistics of the population of Brazil given on page 697 were obtained from a United States Consular Report (February, 1887). The census of 1872, which was only a partial one, returned 3,787,280 Whites, 3,801,787 Half-breeds, 1,954,452 Negroes, and 386,955 peaceable Indians. — Ed.

common tongue. Nearly all the Brazilians are Roman Catholics and nearly all speak Portuguese. However, Guarani, that old Indian idiom, is still in use in several districts of the Paraná and Paraguay basins, principally in the province of São Paulo. A corruption of Tupi prevails, along with Portuguese, in the province of Grão Pará, and it is almost the sole tongue of Alto Amazonas. It is called the *Lingoa Geral*, "general language," because it serves as a means of communication between the Indians themselves and between Indians and Portuguese, in a portion of the Amazon basin. It owes its wide diffusion to the missionaries of the era of the propaganda. Perceiving the impossibility of preaching to each of the Brazilian tribes in its own idiom, the Jesuit fathers sought out an indigenous language which might be gradually adapted to general use throughout the vast territory of Santa Cruz. They selected the Tupi tongue, which has been since that time the *sabir* of Brazil, and which will remain so until all the *patois* of the country disappear before Portuguese — such as it is spoken in Rio de Janeiro, that is, with more richness than in Portugal itself, owing to the infusion of words from Indian tongues and from Negro jargons imported from Africa.

This *Lingoa Geral* is in reality a dialect of the language of the Guaranis, a people which, though to-day menaced with speedy extinction, four hundred years ago ruled from Uruguay to the Antilles. It differs but slightly from Paraguayan or from the indigenous language of Corrientes and São Paulo, and during the war of the Triple Alliance the Brazilian officers from the banks of the Amazon and the Rio Negro had no difficulty in understanding their foes, the soldiers of Lopez. The *Lingoa Geral* has been affected by the Portuguese, and the southern Guarani by Spanish, but neither Lusitanian in the north nor Castilian in the south has materially altered this old Indian speech.

Rapid Growth. — Although the Lusitano-American nation receives as yet not more than twenty or thirty thousand Europeans annually, it is rapidly multiplying. It is supposed that the Brazilians numbered 1,900,000 in 1776, and 3,600,000 in 1818; in 1856 they were rated at nearly 8 millions, and they have now reached fully 14 millions. The yearly increase is from 200,000 to 250,000 souls. Brazil is visited by pestilences, plagues, and scourges, especially yellow fever, and certain provinces are subject to seasons of extraordinary dryness; for instance, only a few years ago a drought occurred which dried up the fountains of Ceará, drained the largest rios, turned the earth to brass, and dispersed the Cearenses through the Amazon districts and south as far as Rio de Janeiro and the southern campos; the same drought brought distress to other coastal provinces — to Piahy, Maranhão, Rio Grande do Norte, Parahyba, Pernambuco, Alagoas, and Sergipe. But the country is so fruitful and the climate on the whole so healthful that the birth-rate is far higher than the death-rate, and the population doubles naturally every thirty or forty years.

Cities. — The three Brazilian towns containing more than 100,000 souls are all cities of the *Beira mar*.

Rio de Janeiro (357,000, with the suburbs) succeeded Bahia as capital about the middle of the eighteenth century. Nearly under the tropic of Capricorn sparkles a small sea, 125 miles in circuit and separated from the ocean by the serra in which rise the peaks of Gavia, Tijuca, and Corcovado (3445 feet); Rio spreads out around this bay — this "miracle of the world" — near the pass, in sight of wooded Corcovado and the fantastic mountains of the Serra dos Orgãos, under a gilded sky from which descends the heavy, humid, electric, enervating heat which makes the

Brazilians and foreigners pay dearly for the splendors of the *Beira mar*. The harbor of Rio is filled with ships, the city is busy, regular, and elegant or unsightly according as its streets are inhabited by white or black Fluminenses.¹

Bahia (140,000) is near the 13th parallel; it is surrounded by the Reconcavo, the garden of Brazil and its most densely peopled region; there are so many Negroes and Mulattoes in Bahia that the Brazilians themselves look upon it as a sort of New Guinea, and nickname it somewhat scornfully the *Velha Mulata*.² Formerly the metropolis of the colony, it has preserved from the era of the viceroyalty palaces, convents, and churches flanked along steep streets and giving it an air of antiquity that is very rare in the New World. The bay of Bahia, called All Saints' Bay, is second only to that of Rio: it has a circumference of 110 miles, depths of 200 feet, and in the pass which connects it with the Atlantic Ocean ships move over 65 to 130 feet of water.

Pernambuco (130,000), another ocean port, near the 8th parallel, is in reality composed of four towns: Recife, a name sometimes applied to the four cities combined, Sant' Antonio, Boa Vista, and Olinda; the last lies on a hill about three miles from the sea.

Fernão de Noronha.—About 200 miles out from the shifting dunes of Cape Saint Roque is the island of Fernão de Noronha, the principal penitentiary of Brazil. It is 6 miles long by about 1½ broad; it has lofty cliffs, an extinct volcano of 625 feet, and it comprises with the adjacent islets an area of about 6 square miles.

GUIANA.

The Guiana Island: its Humidity, its Miasmata, its Fruitfulness.—Although Guiana is not in the sea, it is impossible to quit the country without crossing the water: on the north roars the Atlantic, and on every other side flow mighty currents—the Amazon, the Rio Negro, the Cassiquiare, and the Orinoco. Approaching Guiana from the sea, one is everywhere greeted by the floods of mire brought down by its streams and by the Amazon, and he finds this mire gaining in consistency in measure as he nears the mangrove-trees of the shore. These perpetually stirring fluvio-marine deposits are succeeded by a low plain of earth which loses its coherency during the deluge of the rainy season; it is wholly alluvial and is penetrated by the sea, inundated with sunlight, and furrowed by side-channels and rivers. It is a marsh, a forest, a garden for any one who dares to cultivate it, and for the white man it is a tomb wherever the warm, moist, infected atmosphere is not quickened by the sea-breeze.

From the Marsh, which is a paradise for creeping creatures, the delight of horned toads and hideous *pipa* toads, we ascend along creeks and enter the Savannas, which are also covered for entire months by the annual inundation of the rivers. The Savannas, which are composed of marvellously good, or mediocre, or wretched land, according to the character of the subsoil and the contributions from the uplands, extend to the foot of the mountains of Guiana; these mountains are of granite, gneiss, and mica-schist, and separate the basins of the coastal streams, on the north, from the Amazonian domain on the south. They have rich stores of gold in their

¹ As Rio signifies river (*flumen*), the inhabitants are often called Fluminenses.

² Old Mulattrees.

quartz veins, and particles of it are brought down to the alluvia of the shore by the rios, which descend from rapid to rapid over their beds of hard stone. Guiana is therefore becoming a California in regions where the yellow metal is worked — this land which, in the dreams of the explorers and Conquistadores, was long the sparkling, dazzling, enchanting country where reigned El Dorado, the Golden, lord of



IN A GUIANA FOREST.

treasures that were defended by dragons with flaming breath: this most magnificent king, tales of whom roused so much heroism, caused so much blood to be spilled, and changed the destinies of America, was doubtless only a poor savage chief, living in a rock in which scales of mica glittered.¹

¹ The term *El Dorado* was probably first applied by the Spaniards, not to a city, but to a king of whom they had heard from the Indians. According to the tales told by the Red-men, *El Dorado* was wont on certain solemn occasions to anoint his body with turpentine and then "roll himself in gold-dust." Thus adorned he entered his canoe, surrounded by his nobles, and, after suitable offerings to the gods, plunged into the lake to bathe. It was this lake — only a few days' journey before them, but ever receding as they advanced — which was at first the object of the Spaniards' search. As early as 1530, however, we hear of explorations for the city of *El Dorado*. — ED.

The mountains of Guiana, which are but little known, are low; except on the west, where they bear the name of Sierra Parime, and where they are encircled by the majestic Orinoco, they are nothing more than mere hills. None lifts its head into the icy air: the boldest hardly reaches an elevation of 8200 feet. South of the mountains, Brazil possesses a half of the Guiana island; Venezuela holds a fourth, on the west, toward the Orinoco; the other quarter is shared by France, Holland, and England.

FRENCH GUIANA.

Equatorial France. — From the Wet Lands to the Tumac Humac. — This country, which is, in fact, almost equatorial, stretches from the sixth to the second degree of north latitude, over 46,700 square miles of surface, not including the district vainly claimed from Brazil. The uncontested portion extends from the river Maroni, which separates it from Dutch Guiana, to the Oyapock, which separates it from the territory in litigation. The Maroni, a succession of tranquil reaches, which are connected sometimes by cataracts and sometimes by rapids, rolls 35,000 cubic feet per second at the height of the dry season. It is, however, only 400 miles long, and its native mountains, the Tumac Humac, reach an elevation of only 1300 feet; but not a drop of water is lost on its hard rocks and clayey soil, and the rainfall in French Guiana is prodigious; at Cayenne, for instance, according to the years, it is 8, 10, 13 feet, or more, with a mean of 10 feet 11 inches. The Oyapock, 100 to 125 miles shorter, is a smaller Maroni, although of great volume; it is also made up of long, quiet stretches and short descents, and the same is true of the smaller streams which flow between the Oyapock and the Maroni, such as the Mana, the Sinnamary, the Comté, the Approuague, etc.

Ascending from the mouth of any one of these streams to its source, we encounter, first, the Wet Lands, then the Savannas and hills, and lastly the Mountains; these three regions are all covered with the forest of Guiana. The Wet Lands consist of incoherent or hardened alluvia, with mangrove-trees, muddy creeks, dried marshes, which are designated *pinotières*,¹ and vast fields of grass overgrowing tracts of soft mire, called "trembling savannas," and which are destined to become peat-bogs in the future. It is here that France has been making abortive attempts for 250 years (since 1635) to colonize Guiana, and it is here also that all the civilized or at the very least half civilized settlers live. In the Savanna and around its *pripis*, which are pasture-grounds in the dry season and swamps or lagoons in the wet, the only inhabitants are Indians, known as Emerillons, Oyaculets, Rucuyenes, and Oyampis — all poor, insignificant peoples; and by the side of these Indians are Negro descendants of slaves escaped from the plantations of the Wet Lands, and, lastly, a few men seeking gold here and there in the alluvium of the creeks. In the Mountain, few persons are to be seen except Indians. This upland region, composed wholly of old, compact rocks, is called Tumac Humac. No summit higher than 1300 feet has yet been scaled here.

Who would believe that there are four times as many Frenchmen on the sands and granites of Saint Pierre and Miquelon, an archipelago of 90 square miles buried under benumbing fogs, as on these 46,700 square miles in South America? Of the inhabitants of French Guiana, numbering perhaps 26,000, scarcely 1200 are Whites,

¹ From their pinot or wassay palms.

not including soldiers, seamen, and officers. But there were very many more representatives of this race here when the prisons of France were emptied into the country; the French convicts are now reserved for New Caledonia, and only Anamese, Arab, or Negro felons, who are better fitted to endure the climate, are brought here. It is possible that other Frenchmen will come to Guiana before long, but they will certainly not come voluntarily. This country has been fixed upon as one of the places for the banishment of the hardened criminals of France; the plan is to settle them on the banks of the Maroni, at the very spot where an attempt has already been made to establish a few colonies of agricultural and planter convicts. The fundamental element of the nation consists in Blacks descended from slaves and speaking a Creole French quite like that of Louisiana and the Antilles. This constituent, comprising about 20,000 persons, is growing a little by a congeneric immigration, chiefly from Martinique; these immigrants come for the purpose of seeking gold in the rivers. — Cayenne (pop. 8000), the capital, on an estuary, is a charming Creole town.

DUTCH GUIANA.

Surinam, its Negroes. — Dutch Guiana, lying between French Guiana and the Guiana which the English cultivate by the arms of Hindus, Chinese, Barbadians, and Negroes, was founded principally by Frenchmen who took refuge in Holland after the revocation of the Edict of Nantes. Less than 60 of its 46,072 square miles are under cultivation. The Marsh, the Forest, and the Savanna guard the rest, and they will guard it for a long time yet, for the treacherous climate keeps out Europeans.

The Negroes, who have been gradually becoming emancipated since 1863, do but little clearing of the land; they hardly save the plantations from going back to wild nature. Not that the honest blacks do not live by the labor of their hands, in delightful little gardens, on the hem of the forest, on the banks of a river or a brook, or of one of those canals which have been wisely traced by the Beaver People in the vast marsh called Dutch Guiana. But it is in vain that they lazily cultivate around their wretched huts, in vain that they give their time without a murmur to the planters, — these most laborious and most peaceable of the colonial Negroes are not gaining ground. It is impossible that they should do so, for there are fewer births than deaths among them every year. And, however accustomed they may be to a tropical climate, they are diminishing on this marsh, owing to lack of proper care during early childhood. As for the bush Negroes, their three tribes, which are estimated at 12,000 or 15,000, furnish few laborers for the sugar, coffee, and cacao plantations. They have been free for over 100 years on a free territory, by virtue of a treaty signed by the Dutch governor, and they live happily without any exertion, in the depths of luxuriant woods.

Dutch Guiana or Surinam, as it is likewise called from the large stream which bathes its capital, contains, besides the bush Negroes and about 800 Indians (whose numbers are continually diminishing), 66,000 inhabitants; less than 700 of these are Europeans and less than 4500 coolies, that is, Hindus or Chinese brought to the colony to work on the large estates in the place of the Negroes, who are being freed by degrees, according to terms judged expedient by the Dutch. The Moravians or Brethren of Herrnhut, a sect of the Lutheran belief, have 23,000 adherents here;

they have made more converts among the pagan Negroes than have the other Protestant sects or the apostles of Roman Catholicism. And it is not for these conversions alone that Surinam is indebted to them; it is the Moravians who carry on the schools, and it is they likewise who, by their words of peace, have preserved concord among the Whites and the Blacks for a long time.

Dutch Guiana resembles French Guiana, though it is better drained and better worked; it is to-day, as it was two centuries ago, a littoral marsh skirting a deep forest. This marsh is occupied by pacific Negroes, who are the bone and sinew of the nation; the clearings of the forest are inhabited by bush Negroes, and here also a few Indian



PARAMARIBO.

families hunt and fish — a melancholy, indolent, torpid race, which is disappearing, leaving the world to the cupidity of the strong.

Dutch is the official language; the idiom in general use is a childish Creole, a Negro-Anglo-Lusitano-Dutch *sabir*, simple and soft like all puerile languages. — Paramaribo, the capital, rising on the banks of the broad, tawny Surinam, and on canals, is like a luminous Amsterdam; it is peopled by 28,000 men, almost all Blacks. Although a regular town, it is charming, and it is admirably shaded.

Crossing the Maroni, we pass from French Guiana to Dutch Guiana; traversing the Corentyn we pass from Dutch Guiana to British.

BRITISH GUIANA.

The Most Favored of the Three Colonial Guianas. — This English settlement, which was severed from Dutch Guiana in 1814, has no precise limits except on the north and east. On the north, the waves of the Atlantic rise and fall, and on the east a river separates it from the Netherlands of America; but on the south England contests large tracts of territory with Brazil, and on the west with Venezuela. If these dia-

putes should be decided against England, British Guiana would embrace less than 15,000 square miles. Judged in her favor, her domain here would cover more than 100,000 square miles. Now, neither the Brazilians nor the Venezuelans, nor any one else, dare call England to account; it follows, then, that this British Guiana is the most extensive of the three colonial Guianas, instead of being the smallest. It is also the most favored. It is the only one that has lofty mountains, imposing cataracts, and broad estuaries at the end of its streams. Deep alluvial deposits, extending back 10, 20, and even 40 to 45 miles from the coast, give its fluvio-marine zone a breadth superior to that of the Wet Lands of Cayenne and of Surinam. And when from the Marsh we reach the highlands across a splendid forest, we come in contact with mountains more



A CANOE ON THE ESSEQUIBO.

than 6500 feet high, instead of hills of 1300 to 1600 feet. Near the borders of Venezuela, Roraima attains an altitude of 7500 feet; it is terminated by a rocky tower 1475 feet in height, from which cataracts descend to the Amazon, the Orinoco, and the Essequibo.

The Essequibo, the chief stream of British Guiana, receives the Potaro, which contains a waterfall that is marvellous even in America. The great cataract of the Potaro, called the Kaieteur Fall, is 822 feet high, and it is not a feeble Gave, or a Reichenbach, but a Loire which reaches the brink of the abyss with a width of 330 feet and a depth of 23, and pours over the precipice 1766 million cubic feet of water per day, or over 20,000 per second. In this country, where the rains are excessive and the soil impervious, cataracts are abundant, — not stairways of rapids down which a brook struggles, but frightful abysses, into which leap at one bound huge rivers that are swollen twice each year by the greater and lesser rainy seasons.

British Guiana is much more widely cultivated than are its neighbors on the east;

it is more densely inhabited, and its plantations are extending, its towns are growing, its population increasing — which is by no means the case in the other two colonial Guianas. The inhabitants number about 282,000 ; these are descendants of liberated Negroes, Hindus, Africans, Chinese, and Blacks from the Antilles employed on the sugar plantations, Indians more or less civilized, and about 20,000 Whites.

We must not expect to find the greatest number of these Whites belonging either to the nation which furnished the first planters to the most flourishing of the three Guianas, nor to that which succeeded it on these torrid shores. Neither the Dutch nor the English are in the majority here. The Portuguese are the predominant Whites; they number more than 13,000, 5000 of whom were born in Guiana itself. It is well known that the Lusitanians withstand the effects of deadly climates better than any other colonizing people : and with very good reason when they come from Madeira, an African island opposite Morocco, with better still, if they are natives of the Cape Verde Islands, an archipelago facing the Senegal, and inhabited chiefly by mixed families who are in reality less white than black. Now, nearly all the Portuguese of Guiana come from Madeira or the Cape Verde Islands. These staid men generally dwell in the cities and towns as grocers and shop-keepers. — The capital, Georgetown (pop. 55,000), borders the river Demerara (which has a breadth here of about 6500 feet), a mile and a quarter from the bar which obstructs its entrance to the sea.



CORAL ISLANDS.

OCEANICA.

Australia. — Archipelagoes. — Coral Islands. — Oceanica comprises a continent, — the smallest on the globe, — and innumerable islands dispersed far and wide over vast ocean tracts. The continent, Australia, embraces, exclusive of Tasmania, about seven-tenths¹ of Oceanica; the latter, including the Sunda Islands and the Philippines, contains 4,213,000 square miles.¹ The islands embrace the largest and most favored in the world: New Guinea, Java, Sumatra, Borneo, Celebes, and the Philippines; all of these, with the exception of New Guinea, are usually ranked as Asiatic, but why rob Oceanica of the grandest possessions of the ocean, and, moreover, who is able to fix the boundary line between the most compact of the continents and the most broken and scattered of the world's divisions? The charming archipelago of New Zealand forms a part of Oceanica, as do also the multitude of islands, reefs, and banks which dot the bosom of the Pacific in the direction of the United States and Spanish America. As nearly all these sporadic lands rise south of the equator, they are often called the islands of the South Sea.

Two hundred and ninety of the islands of Oceanica (exclusive of islets) are of coral formation. They have been slowly formed, from age to age, on submarine plateaus, by the growth of minute coral animals. These countless dwarfs have already

¹ See pp. 8 and 15

added more than 19,000 square miles to the habitable portion of the globe, and the cyclopean work is going on still. New reefs are continually appearing; and scarcely



BORABORA, ONE OF THE SOCIETY ISLANDS.

has the islet lifted its top above the waves, when it is clothed with vegetation; then man arrives and rears his hut under the shade of the graceful, lithe palms.

There are more than 39 million inhabitants in the Sundas and Philippines—in

those enchanting islands which we are accustomed to join to the Asiatic continent. The rest of Oceanica contains as yet scarce five million souls; the population of Australia and New Zealand is, however, increasing with almost unprecedented rapidity.

AUSTRALIA.

Fertile Coast Regions. — Sterile Interior. — Australia, the only genuinely southern continent on the globe, has a coast-line of 8700 to 9300 miles, within which lies a territory of about 2,945,000 square miles.¹ It is not improbable that this fragment of land was once connected with southern Asia, by an isthmus which has been transformed, by the action of volcanic forces and by the sea, into a long chain of islands. Like Asia, Australia has fresh, charming shores, with stony, sandy deserts and salt-marshes in the interior. Along the Indian Ocean are glistening bays, leafy ravines, enchanting valleys, forests, and elevated uplands; rains are abundant and the climate is tempered by the sea-breezes. But behind the mountains, fiery winds sweep over flat campos and across vast wastes; the river-beds are dry, the valleys defaced, and the only vegetation consists of thorny, spiny shrubs. Not more than a fourteenth of the entire surface of Australia is capable of cultivation.

Fauna and Flora. — On the arrival of the earliest European explorers, they found the Australian wilderness peopled by wretched savages, inferior to any race hitherto known to travellers. The largest quadruped was the kangaroo; though divers kinds of brilliantly colored birds hovered in the Australian air, they were nearly all songless. Marine mammals swam in the coast waters, but the mountains, ravines, and woods swarmed with awkward, ungainly animals, some of which were curious, others grotesque. The Europeans and their mute servitors have supplanted these aborigines and these pouched and duck-billed animals.

The flora, which is peculiar like everything else in nature on this island-continent, exhibits a certain grandeur. It possesses little variety, however. In many an extensive district only one species of plant is produced, and a half, if not a greater ratio, of all the trees belong to the acacias and the eucalypti; but certain kinds of the

¹ These figures are from Wagner and Supan's tables of 1891. The following table has been compiled from the latest English authorities available: —

COLONIES.	AREA IN SQ. MILES.	POPULATION.
New South Wales (1891)	310,700	1,134,200
Victoria (1891)	87,884	1,137,272
Queensland (1891)	668,497	393,863
South Australia (1891)	903,425	315,048
Western Australia (1891)	975,920	49,782
Total	2,946,426	3,030,165

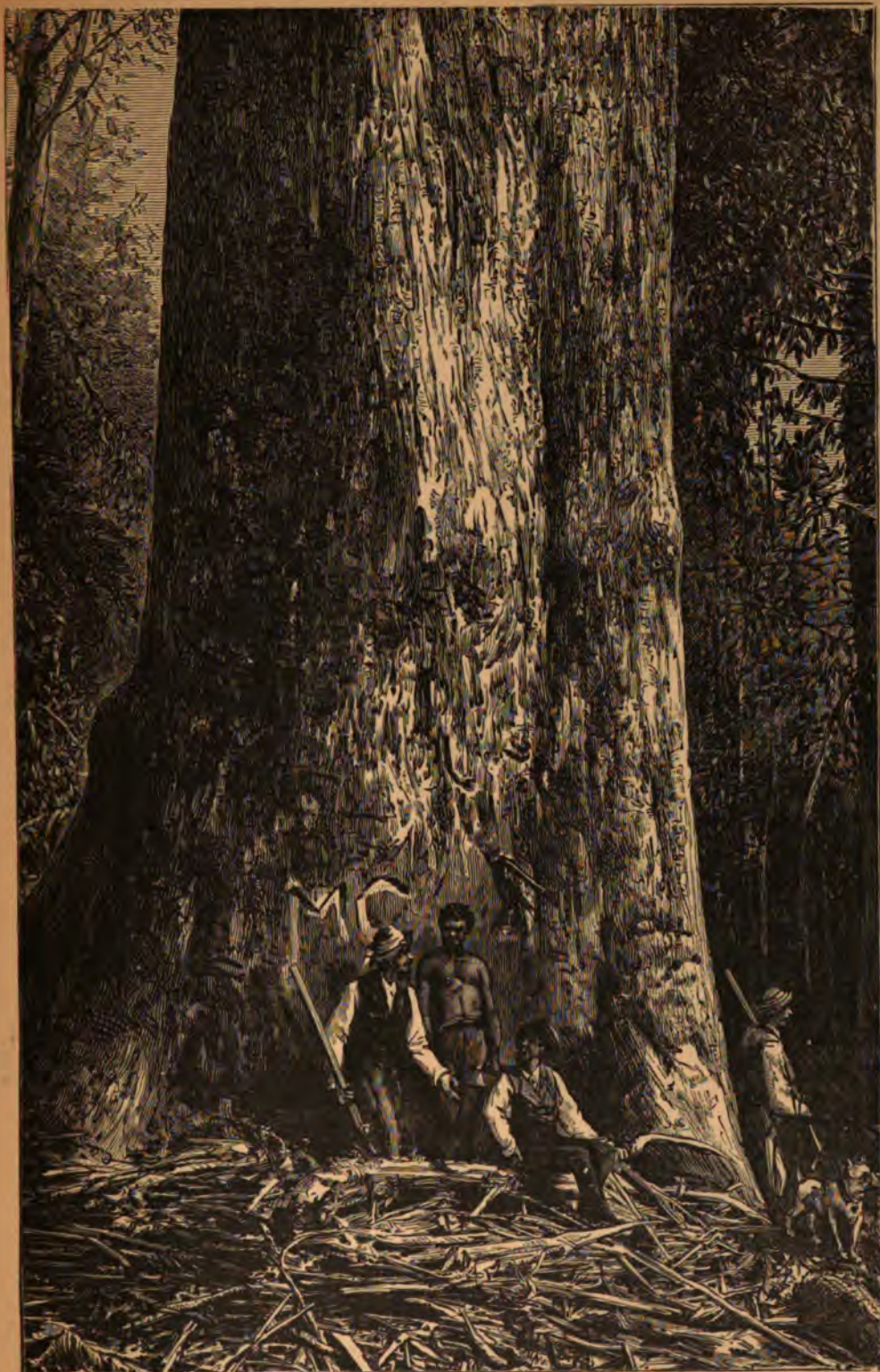
eucalyptus (or gum-tree) grow to such heights that the Strasburg spire, the dome of Saint Peter's, and the pyramid of Cheops would hide their tops in the upper branches. Though the eucalyptus is inferior to the big trees of California in diameter, it attains a height 100 feet above the highest specimens of the latter.

Notwithstanding the size of the gum-trees and other trees of Australia, its forests possess neither the severe grandeur of the woods of northern Europe and Canada, nor the rich autumnal tints of the forests of the United States, nor the grace of the palms of the desert, nor the wild opulence of the Selvas of the Amazon. No bird-song is heard in the foliage, and the thin, dull-colored leaves are no protection to the grayish grass against the burning rays of the sun. There is but little underbrush, and few lianas interwine between the straight trunks of the aromatic trees. Occasionally, however, in the midst of all this seeming monotony we come upon spots covered by an exuberant growth. On the shore of Queensland and in the northern districts, facing the equator, the Australian forest is leafy and luxuriant, it has palm-trees and lovely twining plants, and its masses of tangled foliage make it in a measure a virgin wood.

A striking contrast to the luxuriant growths of the woodlands of Queensland is exhibited by what are known as the "scrubs." These "scrubs," which cover a very large portion of the surface of Australia and form the characteristic feature of the continent, are wide stretches of bush-grown country, drearily monotonous to the gaze and exceedingly obstructive to the labor of the explorer. In books on Australian explorations repeated reference is made to the "Mallee" scrub and the "Mulga" scrub. The former is composed of a dwarf species of the eucalyptus, which the natives call "Mallee." The shrub somewhat resembles the osier, the stems being very closely set, and growing to a height of 13 or 14 feet, without a single branch. In the south-eastern part of South Australia there is an unbroken tract of 9000 square miles covered with this scrub, and similar expanses are to be found in other sections of the country. The "Mulga" scrub consists largely of acacias which grow in sprawling bushes, armed with spines, and matted together in such fashion as to be absolutely impenetrable. Fortunately for the work of exploration, the "Mulga" scrub is far less common than the "Mallee."

Littoral Mountains.—Central Plains.—In the territory which the English first occupied on the south-east, a smiling, graceful, gently rolling coastal belt is backed against charming mountains, called the Australian Alps, in which Mount Clarke reaches an elevation of 7257 feet, Kosciusko 7172, and Bogong 6509. — These elevations, the loftiest on the continent, are altogether too insignificant for a country which is tropical throughout a half of its territory and hot in the other half, stretching beneath a sky which is rainless during long seasons, in plains where the temperature reaches 125° F., and where the sun darts the heat of 160° to 167°.

Owing to the absence of glaciers, the Australians will always be dependent upon the rains to feed their streams, and such a portion of these alone will be stored as can be dammed behind stone and earthen dikes. On the summit of the littoral chains, we find a considerable breadth of high plateaus, then we descend on the west, just as in the Andes we descend on the east, into lower plains, which are everywhere so flat that we can often see the rivers setting back in times of inundation in the direction of their sources. In America, these plains, called llanos, selvas, and pampas, are fructified by an abundant rainfall and give promise of a splendid future, as soon as man shall appear with his enterprise and his thrift; but in Australia the rains are both



ONE OF THE LARGER EUCALYPTI.

rare and capricious, so that the level regions in the interior suffer doubly: the drought scorches them; then, when the flood-gates of heaven are opened, these plains are converted into swamps; the dry, burnt sands of the rivers are invaded by furious torrents which carry in their noisy floods the cattle and sheep that have died of thirst near the dried-up springs. A single season of drought (1883-84) cost New South Wales 5 million sheep. Such a country is better adapted to cattle-raising than to gardening or cultivation. In wet years, the horses, horned cattle, and wool-bearing animals multiply to an extraordinary degree; their skins, tallow, and fleeces make the fortune of the pioneer. When the sun blasts the grass and dries the fountains, the herds and flocks perish, but as soon as the clouds return, the stables and sheep-folds are alive again. The rapid increase of wealth in Australia is due as much to the vast grazing lands as to the gold-mines, but the intermittent character of the rainfall, the scarcity of springs and the readiness with which they become dry, the slight elevation of the mountains, the excessive heat of the sun, and the aridity of the atmosphere, — all these things are to the disadvantage of the country. The leaves which fall from the forest, instead of decaying and forming fertilizing matter, merely wither, and the rock, clay, and sand beneath remain rock, clay, and sand. For these reasons, the resources of the continent are not proportioned to its magnitude, notwithstanding the vastness of its gold-fields, the value of its wool-bearing animals, which will soon exceed 100 million,¹ and the productiveness of the cotton and sugar-cane plantations.

The Australian Aborigines. — Is it because the heat of the sun deprived the natives of all elasticity, boldness, and aggressiveness, or because the land did not offer them "the ear of corn, out of which cities are formed," or the plants and animals without which there can be no permanent form of society, or is it due to some other cause that the Europeans, on their arrival in Australia, found there a hideous, feeble race of Blacks devoid of intelligence, heedless and lazy, — and with all that fanatical lovers of space and of nomad liberty, incapable of bowing to an idea, incapable of confining themselves to a fixed dwelling-place? Here, as elsewhere, the Whites bent their bows against the savages.

The wild men of Australia are as isolated as its fauna and flora. They are distinguished by their fine, glossy, somewhat curly hair, from the woolly-headed Negroes encountered by the Malays throughout the archipelago stretching between Australia and Asia. Tall individuals among them have the stature of the medium-sized Europeans. In muscular development they are much inferior to the European, the limbs being thin and excessively lean. The bones are delicately formed, and the same absence of calves is noticeable as among all dark races. As they go almost nude, none of their ugliness of body is hidden — from their bulging abdomens to their monkey-like faces, with big lips which protrude on account of the prominence of the jaws. Their skulls, covered with a mass of pitch-black hair, enclose very little intelligence; or, at least, when the English invaded the continent, these earth-colored Negroes were mentally children. They rove and hunt, eating everything, even worms and carrion. The gun, famine, misery, brandy, disease, the painful surprise and exacerbation which a savage always experiences at the sight of the inventions of the white man, — all these things have reduced the number of the aboriginal Australians to 55,000.

¹ There were 84 million sheep in Australia in 1889. Including Tasmania and New Zealand the total number was 102,344,209, — *ED.*

The White Australians.—Though Australia was discovered by the Dutch nearly two hundred years ago, and described by the Portuguese earlier still (about 1530), it had not a settled European on its shores when in 1788 a few hundred convicts, guarded by soldiers and accompanied by a governor, landed on the eastern coast of what has since become New South Wales. It was thus that the settlement of Australia began. Sydney was for a long time the only city, and thither England sent her condemned criminals. From 1788 down to the present time, 125,000 prisoners have left the British archipelago, the scene of their exploits, for the continent of Australia and for Tasmania, its annex. In 1828 there were 36,000 to 37,000 Whites in New South Wales, which then comprised all the colonial territory. In 1833, their number exceeded 60,000, and the recruits for the Australian field had ceased to be confined to the criminal classes; England, Scotland, and Ireland had begun to send free families there. Suddenly gold-mines of fabulous value were discovered, and floods of immigrants poured into the country with the impetuosity of ocean waves at high tide: 40,000, 50,000, 80,000, and nearly 100,000 came annually, according to the years. The climate is so healthful, although extremely hot, that the death-rate is very low. Owing to the active immigration, the high birth-rate and the low mortality rate, the Australian desert filled up with cities with a rapidity hardly rivalled in the United States itself; from 60,000 Whites in 1833, and from 400,000 at the time of the discovery of gold, the population rose to 800,000 in 1857, to 1,200,000 in 1861, and to more than 2½ million in 1884. At present the number must be over 3 million.¹ Placing the estimate at 3 million, there are fully 1,200,000 to 1,300,000 Whites of Australian birth. Nearly all the White immigrants are from England and Scotland; next in rank, though far fewer in numbers, are those from Ireland and Germany. Representatives of the Latin races are very rare here. The Chinese, who were so numerous that the Australians were beginning to fear them, have decreased very largely during recent years, and they now scarcely exceed 43,000; they came, and they still come, to work the gold-mines,—the fame of which formerly spread the world over,—and the placers abandoned by the Whites are just those where the Chinese make their fortune, at least such of them as are not ruined by the opium habit and by gambling—the two fatal passions of the disciples of Confucius. Whatever antipathy separates the Australian from the Chinese, the Chinese will perhaps take root on the northern shores, where the climate is so burning that the white man is unable to till the soil himself, but is obliged to have recourse to the Yellow or the Black. In Queensland the climate is not as warm as it is along the northern seaboard, but it is equally as trying to the Whites; here the Polynesians are employed on the sugar or cotton plantations. These laborers are oftentimes brought in by force.

New South Wales was the first Anglo-Australian colony. Victoria was detached from it in 1851, and Queensland in 1859; Western Australia was founded in 1829; South Australia has been colonized by Europeans since 1836; North Australia is not a separate province but depends officially on South Australia. South of Victoria, Bass's Strait beats at the same time the shores of the continent and those of the insular colony of Tasmania.

¹ See page 811

NEW SOUTH WALES.

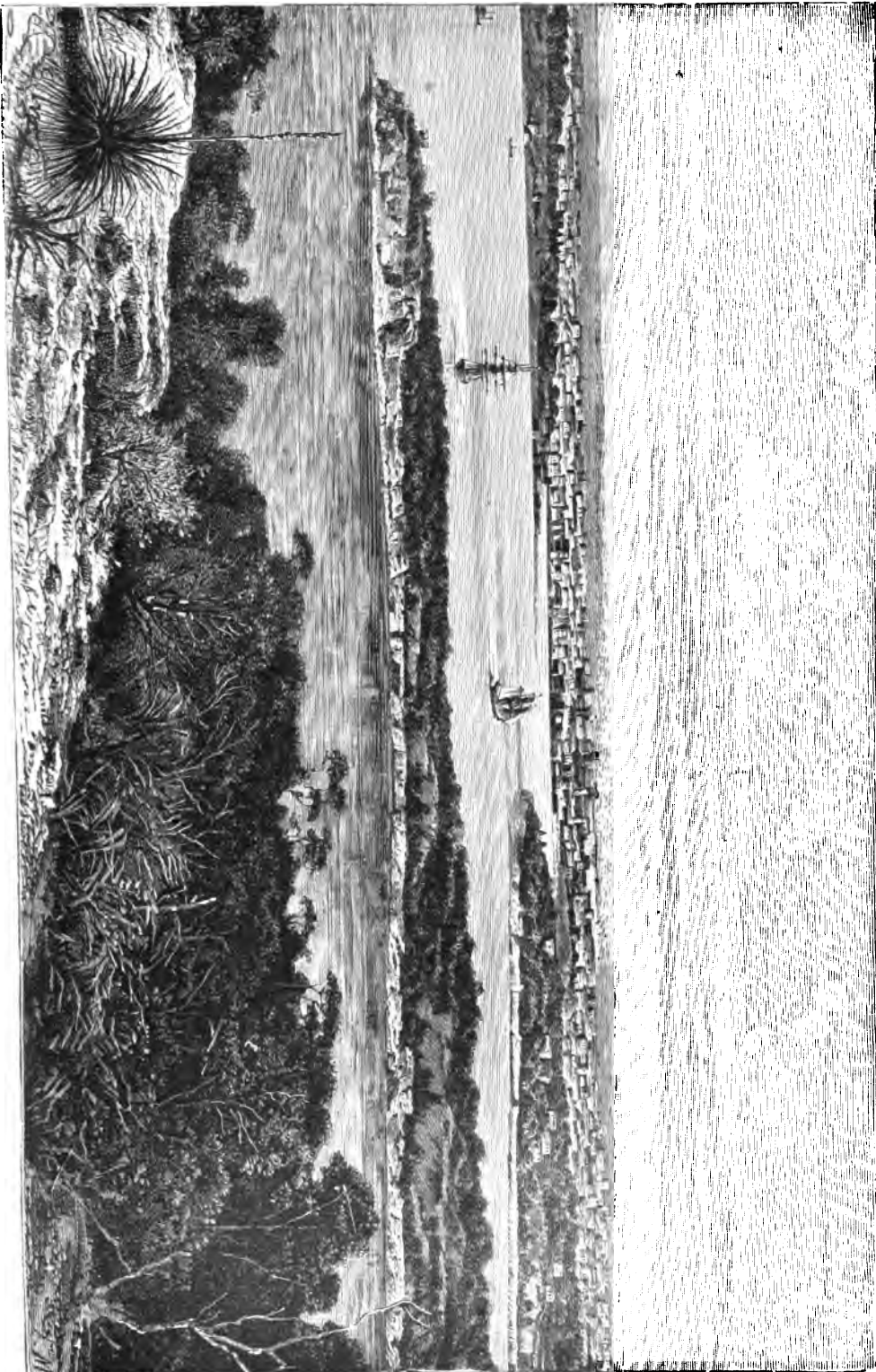
Austral New England.—The Murray.—Like the other Australian states, New South Wales administers its own affairs at will by means of a Parliament consisting of two representative assemblies. It embraces 309,000 square miles of territory,¹ or a little more than a tenth of the continent, and over six times the area of England, with a population in 1889 of about a million, that is, a third of all the Australians; this division constituted the entire colony of Australia from 1788 down to 1829, the year when the Perth or Swan River Colony (which has since become the province of Western Australia) was founded.

Sierras rise near the shore bearing (from north to south) the names of the New England Range, the Liverpool Range, the Blue Mountains, the Cullarin, Gooruck, and Manero Ranges, and the Muniong or Warragong Range: in all, seven chains and nineteen chainlets; these mountains divide New South Wales into two sections, one a small, diversified, charming region, the other vast, but monotonous and dreary. The former stretches along the eastern borders between the uplands and the sea; this is the New England and at the same time the Tell of Australia, — a Tell from 35 to 60 miles broad, and sometimes from 60 to 68 or 70, having for its Shellif a river 329 miles long, called the Hawkesbury. Rains are not rare here, and though during certain years the fall is only 22 inches, at other times it reaches 83, and the mean is 50 inches. Travelling inland from the narrow littoral belt, we climb the mountain chains which run parallel to the coast at an average distance of about 30 miles from it, and which might be compared to the Alleghanies of the United States. The greatest breadth of these mountains probably reaches 80 miles. Beyond the crest, stretches a plateau from 20 to 50 miles broad, with a mean altitude of 2510 feet, in which such primitive rocks as granite predominate. We make the descent from this table-land by the Western Slopes, an undulating declivity of about 90 miles where browse the finest merinos of all Australia. Then follow low plains, but here all resemblance to the physical characteristics of the United States ends. When the New Englanders of America reached the ridge of the Alleghanies, a vast world lay before them; the valleys which they had brought under the plough were as nothing in comparison with the alluvia which their West displayed to them, from the sources of the Ohio to the shores of the Pacific; on the other hand, when the New Englanders of Australia reach the crest of their small Alps, from which the eastern sea is still visible, the best lands of their continent lie behind them. This coast region of New South Wales resembles the New England of America in its history as well as in its situation east of the mountains and along the ocean. It was here that the first English settlements were formed, and here that the foundations of the Australian people were laid.

What is the Australian Great West? An immense level plain of excessively dry and hot pasture-ground, where it is even said that the hottest place on the globe is to be found, — near the confluence of the Darling with the Murray. At long intervals are low hills; streams flow here in the rainy season, in broad, expansive floods, but these soon dry up. Some of these streams belong to the basins of rivers which carry them intermittently into the sea; the greater part of them, however, flow into some desolate lagoon, or they stop on the way as soon as the sky becomes clear again.

The Murray (1122 miles), the Murrumbidgee (1350 miles), the Lachlan (700 miles),

¹ See page 811.



A GENERAL VIEW OF SYDNEY.

the Macquarie, the Darling (1162 miles), the largest rivers of this Great West of New South Wales, roll in their channels floods that are pure and limpid in their native gorges; arriving in the flat lands, they are soon sullied, and drained to quench the thirst of the earth, the thirst of the grass and vegetation, and the thirst of the air. The Murray, which absorbs all these rivers and many others that are long but shallow and weak, is the Amazon of the continent; its basin embraces about 270,000 square miles. It rises on the flanks of Mount Kosciusko, the summit of which crowns 6950 square miles of wooded slopes; it separates New South Wales from Victoria, it waters the plains of the Riverina, and empties into the Alexandrina lagoon, which communicates with the South Sea. Now, it has its sources very near the eastern sea. During a part of the year the Murray is dotted with steamboats; with the exception of the Murrumbidgee, it is the only river of the interior which flows the year round.

Of the climate of New South Wales, it may be said that it varies greatly according to latitude and remoteness from the sea. The winters are very mild; and, though the summer heats are excessive, sunstrokes are of far less frequent occurrence than in the United States. The hot winds which prevail during the warm season are not pestilential nor unhealthful.

As Sully would have said, agriculture and grazing are the two breasts of New South Wales, where there are nearly 50 sheep to every inhabitant. Miners in great numbers search for gold, crush the quartz, dig the alluvium, or overrun the country eagerly hunting for a mass of rock, a stretch of sand, or a creek which may yield them the cherished metal. Many of these miners are Chinese, of whom New South Wales contains about 15,000. There are less than 1650 aborigines.

As the transportation of convicts did not cease before 1843, many of the present inhabitants are the children or grandchildren of criminals from the Triple Kingdom. English is the sole language spoken, and the Protestant religion predominates to a large extent, though in a great variety of sects. There is no establishment, but nearly all the Protestants belong to the Church of England.

The increase of population is rapid both from immigration and on account of the high birth-rate; the number of births is two or three times that of the deaths. The capital is the graceful and charming city of Sydney, with a population of 386,400 souls including suburbs; it is the chief city of Australia as regards age,¹ industries, and intellectual culture: the bay which it borders, Port Jackson, is one of the safest and deepest harbors in the world, and it is surrounded by scenery of surpassing beauty. It contains 9 square miles; but owing to its numerous bays and inlets the coast-line is 54 miles in length. The harbor is protected by five powerful forts.

VICTORIA.

Australia Felix. — Victoria, once called Australia Felix from its beauty and fertility, lies at the very south of the continent, where the climate is coolest. It is the most densely peopled of all the Australian states; the population in 1891 numbered a little over a million on 88,000 square miles, or more than 12 persons to the square mile, that is, ten times the density of population which exists in the Anglo-Australian

¹ It is about 100 years old, having been founded in 1788.

colonies, as a whole, New Zealand included. There were scarcely 250 Whites here in 1836, and not over 10,000 in 1840; but in 1851 the richness of the gold-veins discovered by a miner who had just returned from California suddenly caused a prodigious rush toward this uninhabited district. Similar rushes have been common in Australia. As soon as rumors of a new gold-field are spread abroad, there is an influx of adventurers from all the corners of the earth, and ere long representatives of every nation have reared their wooden towns here. Then the mine is exhausted and the miners disappear. Victoria is the principal gold-producing colony of Australia, and



COLLINS STREET, MELBOURNE.

hence its extraordinarily rapid growth. It was separated from New South Wales in 1851. In 1852 there were 168,000 inhabitants, 550,000 in 1862, and now they number something over a million.¹ As everywhere else in Australia, the increase of population is due to the high birth-rate as well as to the influx of immigrants from Europe: the birth-rate for 1886 was 30.73 per 1000; the death-rate, which is remarkably low, was 14.91 per 1000.

Of the 45,000 Chinese of fifteen or twenty years ago, scarcely 11,500 now remain; and of the 5000 to 10,000 aborigines of 1836 hardly a few hundred are left, and these wander listlessly over the plains and through the forests. In the winter they seek the most sheltered valleys, in the summer they return to the flat country; when hunger pursues them, followed by their gaunt dogs which are little else than barking

¹ See page 811.

skeletons, they hunt the opossum, the kangaroo, the Australian bear or koala, the wombat, the porcupine, serpents, lizards, and white mice, or they hire out to the white man for a little tobacco and rum.

Victoria has a share in the Australian Alps and in the Murray River, or, in other words, in the principal mountains of the continent and in its chief water-course: in the Australian Alps it rears Mount Bogong (6509 feet); the Murray belongs to New South Wales by its right bank, while the left bank is Victorian as far as the point where the stream passes into the colony called South Australia. With the exception of the Murray, Victoria possesses few navigable streams. In winter its rivers are chafing and devastating torrents; in summer many of them dwindle to insignificant currents or become detached pools of water; and some dry up entirely during seasons of unusual drought. In the order of their length, the chief streams of Victoria are: the Murray, the main stream of which bounds the colony for nearly 600 miles; the Goulburn, a tributary of the Murray having its source in the Dividing Range, and having a length of 230 miles; the Glenelg, 205 miles long, which rises in the Grampians and empties into the sea at the south-west corner of the colony; the Loddon, 150 miles in length, which originates in the Dividing Range and flows to the Murray; the Wimmera, which rises in the Pyrenees and the Grampians, and is lost in salt marshes before reaching the Murray; the Avoca, 130 miles long, rising in the Pyrenees and also terminating in swamps and lakes; the Hopkins, 110 miles long, which rises in the Pyrenees and flows south to the ocean.

In the Australian Alps and in all the ranges running through the colony from east to west, Victoria may be said to be an Australia Felix. The mountains, which are covered with dense forests, are often grand and imposing. In the west, where they take the names of the Pyrenees and Grampians, the scenery is extremely picturesque, and the rivers are broken by waterfalls of great beauty. All the country west of Melbourne has an extraordinarily rich soil, and the scenery is varied and charming. But beyond the mountains, north of the Dividing Range, in the direction of the Murray River, the country is rather an Australia Petræa; here stretches a vast, monotonous plain, a treeless, sparsely grassed campo; and the little grass that grows is gray or pale, rather than green; low hills of schist rise out of the wan or fulvid expanse. It is a sombre region wherever the soil is of volcanic and not of sedimentary origin. No rivers and few brooks are to be seen, but salt lagoons abound. The climate is very gruff and harsh, for, although the mercury sometimes sinks below the freezing-point, it also rises on the burnt plains to 125° F. in the shade, when the wind blows from the central desert. It is rain that is lacking here; terrific storms are sometimes unchained, — water-spouts which convert a brook into a mighty stream and a pond into a sea, — but, on the whole, this section of the country is arid, and the rainfall is much scantier than at Melbourne and in all the districts south of the Dividing Range: the annual mean at Sandhurst is scarcely 20 inches, with years that are almost rainless, while that of Melbourne is 28 (with a maximum of 44), that of Cape Otway 33.

This mining country, this grazing region, with its immense estates¹ where huge flocks are pastured, is essentially English in race and purely so in speech. Its capital, the largest of all the Australian cities, is Melbourne, on the Yarra-Yarra, a scant, narrow, miry stream which empties not far from the city into the broad bay of Port Philip; including suburbs, there are 489,000² souls in Melbourne; its climate is said to resemble that of Mafra, a city of Portuguese Estremadura.

¹ From 75,000 to 100,000 acres.

² This was the population according to the census of 1891.

QUEENSLAND.

It was in 1859, eight years after the founding of Victoria, that the second province was detached from New South Wales; it received the name of Queensland. It lies north of New South Wales, and possesses 2250 miles of seaboard, including all the eastern shore, which stretches north to Torres Strait, and embracing along the northern coast of the continent the eastern and a part of the southern shore of the extensive Gulf of Carpentaria. In the interior are vast steppes.

Queensland now comprises an area of 668,000 square miles, but a division of the territory will doubtless be made in the near future, for the North demands a separa-



A VILLAGE ON THE DARLING DOWNS.

tion from the South, on account of certain antipathies existing between the two sections, and owing to a divergency of interests. At varying distances from the shore, the sea beats against coral islets. This levee of constantly growing reefs makes navigation difficult and dangerous, but ships find ample, sheltered basins within the coral-line dikes, and the shore is fringed with safe coves. The Queensland littoral may be called temperate near the frontiers of New South Wales, but in measure as we move northward we find the climate becoming more and more torrid. Almost the sole tenants of this immense desert are English, Scotch, Irish, and Germans. In the southern districts it is possible for the white man himself to work in the sun, and it is in this region that the colonists have settled largely, either because the temperature is less torrid or because of the proximity to New South Wales, from which colony the founders of Queensland came. In the northern countries, nearer the equator, the Whites are compelled to have recourse to laborers from the tropics, and they import, among others, islanders from the Marshall Archipelago and from the New Hebrides.

Behind the littoral chains, which prolong the mountains of New South Wales, lies the Downs country, a thinly wooded plateau, with meadows favorable for sheep-raising, and, in places, tracts of excellent soil which will not disappoint the tiller except

when the sky refuses him rain. Beyond the Downs, such as the Darling Downs and Peak Downs, grazing lands resembling those which begin at the eastern base of the Blue Mountains in New South Wales stretch away far toward the centre of Australia; only it is hotter in Queensland according to the latitude, and the less humid mountains do not feed currents like the Murray and the Murrumbidgee. The sheep increase rapidly here; they make the fortune of the sheep-raisers, and at the same time of the dealers in wool, skins, and tallow. Among the rivers of these steppes, several, such as the Condamine and the Warrego, flow to the Darling; others unite to form the Cooper or Barcoo, the Diamantina, and the Herbert, all of which descend lazily toward Lake Eyre (in South Australia), a desolate lagoon scarcely above sea-level; a vast number of small streams become dry on the route, evaporated by the sun and absorbed by the sand, soil, and brackish hollows.

Queensland lies under a tropical sky, though the heat is perhaps less oppressive than it is farther south; rains, without being excessive, restore at certain seasons freshness to the burnt soil, savoriness to the withered grass, and murmuring crystal to the fountains; Queensland is however of mediocre importance when compared with the different tropical countries girdling the globe with two brilliant belts, one north, the other south of the equator. It lacks the snows that make the wondrous beauty of so many tropical regions, the torrents that spring suddenly into being from the glacier's edge, and all the charms and splendors of low valleys. The culminating peak of the Queensland mountains reaches a height of only 5900 to 6500 (?) feet. But if it were twice as high, it would support no snow-fields nor rivers of ice. The summers, therefore, though short and of moderate heat, obliterate the long rivers of this colony. The streams, which a few stormy weeks had filled with rumbling floods, become in a few days silent, rugged, torrid ravines; they are then, and for long months, hollow roads of gravel, limestone, or basalt, with pools infested with sleepy crocodiles equal if not superior in size to the crocodiles of the sacred stream of Egypt.

At the time of its separation from New South Wales, Queensland contained only 28,000 inhabitants, and these were scattered over small districts near the frontier of New South Wales. Owing to the frequent arrivals of ships laden with English, Scotch, and Irish settlers, owing to the rush for the gold-mines, and also to an average of more than two births for every death, the population numbered 120,000 at the decennial census of 1871, 214,000 in 1881, and it must exceed 400,000¹ to-day;—of these, 8000, at the most, are Chinese, nearly all of whom are in the gold-mines.

The capital, Brisbane, is situated on the banks of a coastal stream terminating in Moreton Bay, a broad shore indentation. It was originally settled as a penal station (1825). Since the opening of the colony to free settlers the city has grown rapidly, and it is estimated that the present population is about 93,000 (with suburbs).

SOUTH AUSTRALIA.

The Goyder Line. — The Northern Territory. — The old colony of South Australia lies west of Victoria and New South Wales; it comprises 378,000 square miles. The soil is valueless except in the extreme south-east, on the lower Murray and along the extensive gulfs of Saint Vincent and Spencer, south of what is known as the Goyder line of rainfall. This line, drawn by the surveyor-general, Mr. Goyder, marks the

¹ See page 811.



BRISBANE.

boundary between the grain-growing lands, which stretch southward to the sea, and the pasture-grounds, where for want of regular rains the farmer seldom sees crops starting. In the west, the Goyder line runs along the very shores of the ocean, so that the coast itself is brazen and sterile, waterless and uninhabited. Adelaide, which is in the most favored part of the country, has a mean annual rainfall of only 21 inches, with a minimum of 14 and a maximum of 31. The Ukuparinga is the only river whose flow is constant.

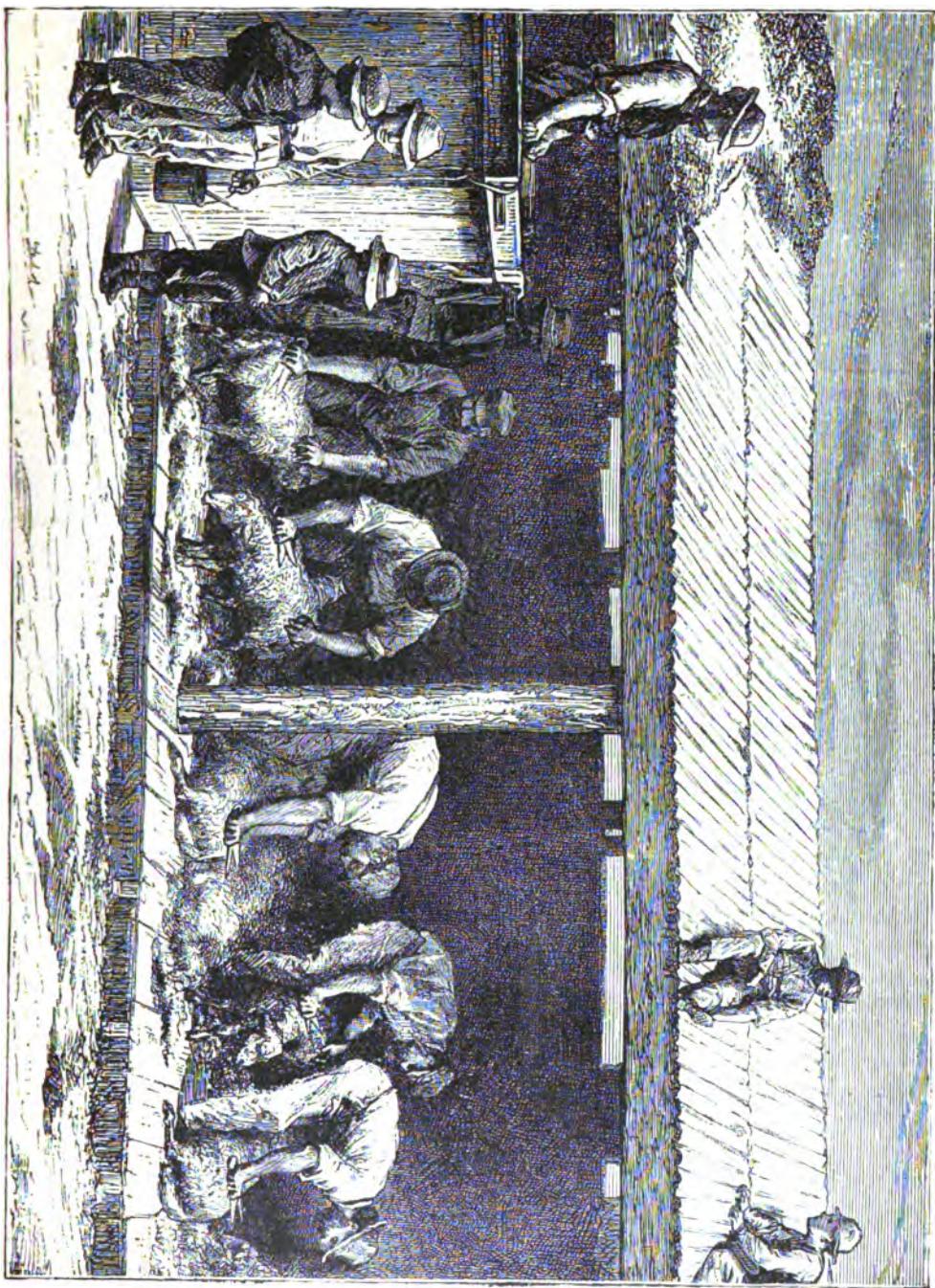
As the men who have traversed the centre of the continent, often at the price of their lives, and explored the northern littoral have all been South Australians, the



KING WILLIAM STREET, ADELAIDE.

colony has annexed the Northern Territory. The vast central desert separating the State from the Territory has been named Alexandra Land. Since the annexation of these 525,000 square miles, the name South Australia has become a complete misnomer. "Central Australia" would better define its position geographically and with reference to the other colonies. If the attempts at settlement are at last successful in the north, the Territory will probably erect itself into an independent state. At the present moment, notwithstanding the most persevering efforts at colonization and a great outlay of money, it is doubtful whether it contains 5000 inhabitants, and these are for the most part Chinese.

With all the northern annexation, South Australia embraces 903,000 square miles, about a fourth the area of the United States, Alaska included. Telegraphic commu-



SHEEP-SHEARING IN AUSTRALIA.

nications have been established between the southern colony and the northern province, but this is not one of those regions that highways, railroads, and electric wires wholly transform before the heads of the pioneer settlers have whitened. Water is wanting and forests are rare, — even rarer than they were fifty years ago, for many of the woods have already been felled. On the southern coast are fine and favored valleys, but the interior is composed almost wholly of deserts, gray plains, and fulvid hills; grass springs up after the rains, but it is almost immediately burnt by the sun and the Saharan winds. None of the Australian colonies has so many lakes as South Australia, but unfortunately these sheets are for the most part little more than muddy swamps. Lake Torrens is often a mere marsh; Lake Gairdner is a vast salt lagoon



THE COURT HOUSE, ADELAIDE.

surrounded by deserts; Lake Eyre is also a salt lake, and with the neighboring clusters of smaller salt lakes is liable to be converted into a plain of saline mud. Some of the lakes are far from any eminence, some are dominated by buttes. The country is especially desolate in the sections along the line of the transcontinental telegraph: nothing grows here, nothing lives, nothing moves. From one station to another stretch reflecting plains, with thorny bushes, saline depressions, waterless river-beds, naked mountains and hills, and the traveller encounters no friendly face in the burning desert where only recently death kept watch for the passer-by, whether explorer or adventurer; thirst, famine, disease, and the aborigines have overcome more than one man of iron here. The savages have now disappeared, and one finds water, rest, and sleep in the stations; but neither wood, nor verdure, nor freshness, nor frolicsome brooks yet adorn the country. It is here and in West Australia that the continent gives least promise of a glowing future for this young and prosperous nation.

The South Australian colony dates from 1836; it has peopled rapidly in spite of



ARBORESCENT FERNS.

the scarcity of running waters. Infinite space opens before the young families and the air is marvellously healthful; the births are to the deaths as 10 to 4. All the plants imported by European colonists thrive, including grains, fruits, vegetables, the vine, olive-tree, and orange-tree. The decennial census of 1881 returned 280,000¹ inhabitants in South Australia, mostly of English parentage, though a few were Germans. There are perhaps 3500 savages in the province, exclusive of Alexandra Land and the Northern Territory.

The capital, Adelaide (pop. 133,000), is situated on the Torrens River not far from its entrance into Saint Vincent Gulf, a deep indentation of the south-eastern coast; to the east rise low mountains separating the shores of this gulf from the melancholy waste where the Murray terminates.

WESTERN AUSTRALIA.

West Australia, comprising an area of 977,000 square miles, is peopled by 44,000¹ inhabitants. Even if nine-tenths of this territory, which is still almost unexplored (at least in detail), consists of gravel, sands, and uncultivable land bearing nothing but spinifex, the rest, under a climate the most favored in the world, would easily support one hundred or two hundred times the present population. Recent explorations have shown that the south-west, where down to the present day the colonists have been largely concentrated, is not as valuable as the north-west, where fine pasturage has been discovered, and where the climate is more humid, along the Murchison, the Gascoyne, the Ashburton, the Fortescue, the De Grey, and the Fitz Roy. All these regions are however almost unknown to Europe, whose first occupation (1829) nevertheless dates back almost sixty years. The births have always far outnumbered the deaths; for many years, the only re-enforcement received from England consisted of convicts. But transportation of criminals to Australia has now entirely ceased.

Perth (pop. 9,000), the capital, mirrors its dwellings in the Swan River, which empties into the western sea not far from the town.

TASMANIA.

Tasmania. — **The Extinct Tasmanian Blacks.** — The island of Tasmania, formerly called Van Diemen's Land, is separated from the Victorian littoral by Bass's Strait. Its area is about 26,375 square miles. The 42d parallel of south latitude crosses it exactly in the centre. Tasmania serves as a summer resort for Australia. The Australians debilitated by the torrid winds, and the English enervated by the tropical heat of India and China visit this fortunate isle to seek cool shade, health, and comfort. Tasmania is, indeed, charming. Along its deeply fringed and lofty coasts delightful valleys open, which rise toward plateaus sparkling with lakes, buttocks clothed with forests, and peaks on which the snow glistens during half the year. There are no persistent snows, and no mountain rises much above 4900 feet, but the rainfall is sufficient to feed the rivers and foaming cataracts and preserve the verdure of the grassy uplands. The rains are even too abundant all along the western coast,

¹ See page 811.

in the region where tin is produced, and where woods and desolate heaths abound, and where sombre granite is the predominant rock. Everywhere else in the island, winds and clouds are less prevalent, and the primitive rocks, schists, lavas, and basalts, the arborescent ferns, the brakes, the forests, the lovely lakes, remind one at the same time of Switzerland and Scotland, — a graceful Switzerland, a luminous Scotland, lying in latitudes corresponding to those of Naples and Ajaccio.

The first white inhabitants of Tasmania were convicts, who arrived in 1803, and for fifty years, down to 1853, the colony received from the United Kingdom convoy after convoy of murderers, thieves, counterfeiters, and desperate characters who had escaped hanging. In 1846, the white Tasmanians numbered 66,000, 29,000 of whom were criminals; in 1889, the island contained scarcely 152,000 persons. The population does not augment in Tasmania at the rapid rate that it does in most of the English colonies. Tasmania receives few immigrants, notwithstanding the healthfulness of its climate, the charming grace of its valleys, and the fertility of its soil. Though the colony possesses rich gold and tin mines, the young men quit it for Melbourne and other parts of Australia, and for New Zealand.

The black Tasmanians have ceased to exist. No one knows how many thousands occupied the island on the arrival of the first European convicts; in 1815, they still numbered 5000. It was in 1804 that the work of extermination began. Toward the end of 1833 a force of more than 3000 men (a quarter of whom were prisoners), divided into 119 companies, was organized for the annihilation of these natives. In 1835, the 210 individuals constituting the abject remnant of the race were transported to the little island of Bruny and afterward to that of Flinders. They have now entirely disappeared, with the exception of one aged woman whom the Tasmanian Parliament has recently pensioned. She is the last of her people; the last but one was Lalla Rookh, who died in 1876. Lalla Rookh had once been a queen. She had been married five times and had had as husbands five kings; the fifth of these, who died in 1869, was the last of the male Tasmanians. Lalla Rookh left neither son nor daughter nor grandchild behind her; the grass growing over her grave marks the close of the dynasty; the hillock 'neath which the other aged woman will soon sleep will mark the extirpation of a people, and there will be no Tasmanians except such as lie under the sod; not one will tread the earth carrying in his brain the ideas of his race, and bearing on his lips the harmonious tongue in which Lalla Rookh was called Ligiugi Truganina.

Hobart Town (pop. 38,000), the capital, on the estuary of the river Derwent, at the base of a mountain 3940 feet in elevation, is situated in the most charming part of the island, — in the south; its growth is slow like that of Tasmania itself.

NEW ZEALAND.

Maoris and Whites. — The first European commander who contemplated these shores (in 1642) was the navigator whose name Tasmania has taken, Abel Jensen Tasman, a Dutchman. The unknown island — a huge pile of lofty mountains with conical volcanoes, glaciers, and torrents — was honored by him with a name recalling Holland, its sands and mire, its marshes, and its flat alluvial tracts. We say the island, for it was originally believed to be a single mass of land. The navigator

James Cook was the first to discover the channel separating North Island from South Island; this strait is now known as Cook Strait. It is not so wide as to make it impossible that the two fragments of the New Zealand territory may one day be united by a tunnel. During the latter part of the first quarter of this century, a few whalers, seamen, adventurers, and renegades escaped from Sydney, settled one by one around the Bay of Islands, on the north-eastern coast of North Island. At that time the sole inhabitants of New Zealand were Maoris. The Maoris belong to that fine Polynesian race which extends from New Zealand to the Sandwich Islands, a distance of 4150 miles, from the Sandwich Islands to Easter Island, 4225 miles, and from Easter Island to the land of the Maoris 4050 miles: an immense empire if the ocean did not occupy almost the whole stretch, while the land is grouped in small, isolated archipelagoes.

At some unknown epoch,—thirteen hundred and ten years before our era, according to certain authorities, thirteen or fourteen hundred after, according to others,—a flotilla had landed a few hundred warriors, the ancestors of the race, in North Island. These warriors found here only scattered aborigines, a few Australian Negroes, who doubtless did not disappear without leaving traces of their existence in the texture of the people which sprang from the invaders. They came, according to their traditions, from the Island of Hawaiki, now an unknown country,—but very probably it was either the Hawaii of the Sandwich Islands or the Savaii of Samoa. When the Whites (called by the Maoris, Pakehas) landed in New Zealand, the Maoris had therefore occupied the country for hundreds and perhaps thousands of years; they were almost all in North Island and were split up into hostile tribes; but this intelligent, energetic, noble, and vigorous race, these stalwart, well built, magnificently tattooed braves, were not disposed to yield their right to the soil, and their blood flowed in torrents; moreover, since earliest times they had poured out their blood lavishly. They delighted in war; they were cannibals, and when the battle was over the conquerors feasted on the conquered. It was hoped that so vigorous a people would adopt civilization without being effaced, but as they were few in numbers and not prolific, it was impossible that they should hold their own before the Whites whose fertile families were attracted by thousands and tens of thousands into New Zealand, by the gold mines, the excellent pasturage, and the charming climate.

Were there 200,000 Maoris in the double island at the time of Cook's voyage? It is doubtful. Did they number 140,000 in 1840? It would be difficult to say; but all evidence goes to show that they have diminished remarkably. The decennial census of 1881 returned only 44,092 against 489,933 non-Maoris, that is, a ratio of one to ten or twelve, and yet they had formerly been as ten or twelve to one. There has been a decrease (1886) of 2123, but the Whites have continued to augment with amazing rapidity. In South Island there are only a few hundred; nearly the entire race is crowded into North Island, in the districts around the hot springs and geysers, in the very region where the last struggle for independence occurred; this heroic fight took place in the beautiful basin of the Waikato, and the battles were fought behind earthen ramparts and palisades of stakes. The English were not the only enemies of the Maoris; they had to contend also against certain kindred tribes which formed alliances with England for the purpose of accomplishing the destruction of the free nation. Their fate is now irrevocably sealed. The inevitable process of extinction goes steadily forward. The Maoris know that the white man never



LAKE TACPO.

retreats, and that sooner or later he will be heir to all their domain. They have ceased to sell their lands as they did in the years immediately following the British occupation of the archipelago (1840), when they ceded to the Company of New Zealand broad plains and extensive valleys for a few toilet articles and a few guns.

Through the teachings of English missionaries, the Maoris have abandoned their native religion and adopted Christianity. At present they are fusing to a certain extent with the Whites, and from the mixture a very fine race of half-castes is forming.

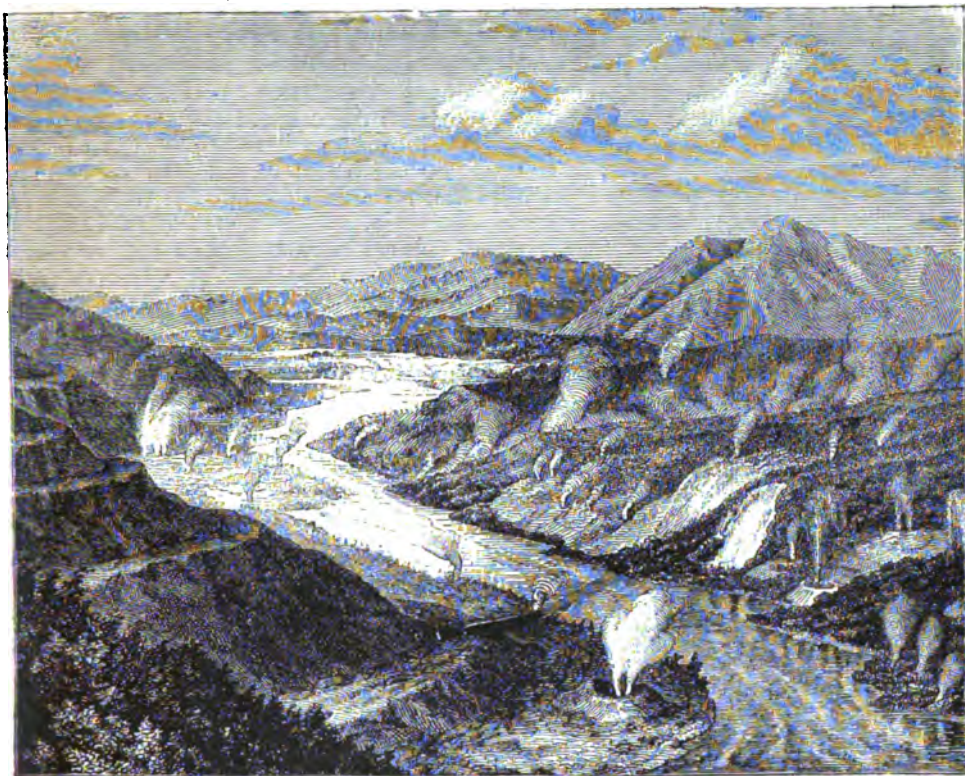
Toward 1840 France had an idea of colonizing in the southern seas, and she fixed upon New Zealand as a desirable spot for settlement. At that time the island belonged officially to no one. About sixty French families soon settled in South Island on the peninsula of Akaroa, and later on these were joined by a few others. England annexed New Zealand, and of the French attempt at colonization no evidence now remains except three or four aged inhabitants whose children and grandchildren have become Englishmen. In a very few years the French colonists were submerged by a double wave of existence, one rolling inland from over the sea, — the immigration from the Triple Kingdom, — the other having its origin in New Zealand itself — in the natural increase of the families; the Whites are very prolific here and the death-rate is extraordinarily low; few regions have as healthful a climate, as the number of hale, robust old men attests.

North Island possesses 45,000 square miles, South Island 55,000, Stewart Island and the coastal isles and islets 4000, making an archipelago of 104,000 square miles. The census of 1886 fixed the population at 578,482, exclusive of aborigines.

North Island: Volcanoes, Geysers, Boiling Springs. — North Island, which contained 250,000 inhabitants in 1886, is called in the Maori tongue *Te Ika a Maui*, the Fish of Maui, because, according to the legend, Maui, the Polynesian Hercules or Samson, fished this land out of the billows of the South Sea. The official title of New Ulster, derived from an old Irish province, is now out of use, and was never employed except by government officers, and possibly by some of the Irish inhabitants.

As New Zealand emerges from the sea south of the equator, North Island is in reality the southern island in climate and productions. Its northern point is on the parallel corresponding to that of Biskara, the southern touches that of Rome, but the climate, tempered by the sea, is nowhere as burning as that of Biskara, and, except in the uplands, it is everywhere more equable than that of Rome. For invalids afflicted with lung diseases the air is said to be more favorable than in Madeira itself. Other maladies find a cure in the numberless thermal springs of the heart of the island, which abounds in extinct volcanoes, cooled lava-streams, lakes embosomed in old craters, boiling springs, fumaroles, solfataras, and intermittent jets of water like the geysers of Iceland or those of the Yellowstone Park. Not far from the centre of North Island, Mount Tóngariro (8200 feet), a still active volcano, rises above the Taupo, the principal lake of the island and the source of the Waikato, the chief river of the island. It has two solfataras. Its neighbor, Mount Ruapehu (9186 feet), at present extinct, supports on its summit — the loftiest of the island — battlements of eternal snow. These two mountains contemplate groups of small satellites which the Maoris call the "wives and children of the giants Tongariro and Ruapehu." The legend relates that a third giant Taranaki defeated by the other two fled toward the western coast, where he stands to-day, grand in his isolation, a symmetrical, beautiful pyramid capped with snow: this is Mount Egmont (8268 feet).

South Island: The Southern Alps.—In North Island we find all the grace and charms of Naples, with volcanoes that are higher and more beautiful than those in the vicinity of the Italian city, with a brilliant sky and the marvellous decoration of the arborescent fern. In South Island are lofty, severe mountains with glaciers and cold and treacherous torrents; melancholy winds sweep across the sand, and rains overhang the fiords. This Te Wahi Panamu, or Jade Island, of the Maoris has not retained its official name of New Munster any more than North Island has kept that of New Ulster. Its northern cape plunges into the sea nearly opposite Naples, the



GEYSERS AND HOT SPRINGS ALONG THE WAIKATO.

latitude of its southern promontory corresponds to that of central Switzerland. If the northern promontory of the New Zealand group projected into the Lake of Constance, the archipelago would traverse Switzerland, cover all Italy, and terminate in the Tunisian Sahara. What a series of climates would exist here, then, if the land were not so narrow and so closely pressed upon on all sides by a vast ocean!

South Island contained 327,000 souls in 1886. As it extends much farther in the direction of the pole than its sister land, and as the mountains are loftier, the temperature is not as mild as along Cook Strait; still, this latter seaboard is forever assailed by inclement winds, like the entire western and southern coast. At Nelson, which faces the north, as at Hokitika, which looks toward the west, as at Invercargill, which fronts the south, a day free from violent winds is considered almost a miracle; in the

eastern part of the island, where the atmosphere is calmer, there are 80 or 90 quiet days every year—but this is less than a fourth of the twelve months. However, these strong winds are full of life-giving power. The climates succeed one another from north to south, like those of northern France, England, and Scotland. Arctic frosts reign on the mountain-tops, for the Southern Alps reach altitudes intermediate between the highest Pyrenees and the Alps of Europe. Mount Cook, the Mont Blanc of New Zealand, attains an elevation of 12,349 feet.

On the west, the Southern Alps plunge into an almost fathomless ocean, along an extremely rainy coast; the air is so humid here that the gorges of the mountains are filled by glaciers comparable to those of the most heavily mailed Alps of Europe. One of these, the glacier of Waiau, discharges a huge torrent from out a blue cavern resembling the arch of the Arvèron; this grotto does not open on a white, dead expanse, but in a charming forest of aciculars and of arborescent ferns, only 696 feet above sea-level, in the latitude answering to that of Provence, where the palm-tree flourishes in the open air. We must visit polar regions to find other glaciers at this humble altitude. On the eastern slope, the rainfall is only a fourth as great, and the glaciers do not descend as low. The Tasman glacier, on the same parallel as that of Waiau, stops at an altitude of 2730 feet; it is, however, more extensive and more ponderous.

The western coast of South Island is crowded against the sea by a very lofty pile of mountains, but the eastern is separated from the New Zealand Alps by vast plains, which are destined to be tilled in the near future; it is a broad stretch of country that lies between Lyttleton or Dunedin and the glaciers, the lakes, and the tall Kauri pines of this Oberland. Owing to the extent of the arable land, and to the favoring climate, which is sufficiently cold to inspire in man a disposition for toil, the two districts of Otago and Canterbury, consisting of naked but fertile fields, will probably control the future of New Zealand; moreover, the larger part of the inhabitants belong to a race which has succeeded everywhere: "wherever a thistle grows, a Scotchman will make a fortune," it is said.

Rare Beauty of New Zealand.—Two-thirds of New Zealand will be converted into cultivated fields, gardens, and meadows; the other third will remain stubborn uplands, rock, and waste and sterile soil, with lakes, swamps, and torrents. Even this third is not wholly lost territory; in the waters of some of the rivers rolls the metal which is noble or base according to the hand from which it falls; in the rocks are hidden coal, copper, and the veins of gold which have lately given such an impetus to the growth of New Zealand. Notwithstanding all the other gifts of nature, few immigrants came to the archipelago, and South Island was almost uninhabited when the discovery of the gold-fields of Otago brought in a legion of adventurers, and these were soon followed by an army of gardeners, field-laborers, mechanics, and speculators of all sorts. North Island also has its California now, along the Thames.

As the name New Zealand is a complete misnomer, it has been proposed to rechristen the country South Albion, South Britain, or the Great Britain of the South, and the name Victoria Island has also had its champions. In fact, the situation of New Zealand at the antipodes of western Europe and particularly of the British Isles, its division between two large islands, its area which is almost exactly that of Great Britain, its lofty cliffs, its severe, storm-beaten shores, stretching under a humid, wind-swept sky, its subterranean treasures, its cities in which the English tongue is heard from the lips of Englishmen and Scotchmen, give it undis-

puted right to the rank of the Albion of the South. But the most suitable name for it would be an impossible one; to characterize it properly it would be necessary to recall England, Switzerland, Italy, and Iceland; for New Zealand resembles to a certain extent all these four countries. The New Zealand fauna and flora are so isolated as to furnish ground for the belief that the double island is the visible remnant of a great continent which has sunk into the sea. It is not long ago that the Moa, an enormous bird (fully ten feet tall), disappeared from the country, and even now gigantic ferns and forests flourish here that recall another era of our planet.

The seat of the New Zealand parliament, Wellington, is a city of 33,000 inhabitants (including suburbs), situated in North Island; it borders Port Nicholson, an ample, deep, and safe harbor opening on Cook Strait. Its pedestal sometimes rocks, for New Zealand is subject to earthquake shocks: these "antipodal" Englishmen therefore build their dwellings out of brick or wood rather than of stone. Wellington is the oldest city of New Zealand, since it dates back to 1840, but it is not the largest. The chief city is Auckland (pop. 33,000, 51,000 with suburbs), situated on an isthmus which is dotted with extinct volcanoes; at least 60 once active summits are crowded into the narrow limits of this strip of land, and out of the waters of its bay towers Rangitoto, or the Bleeding Sky.

The chief city of South Island is Dunedin (pop. 45,500, with suburbs); it lies on the south-eastern coast, in the district of Otago through which flows the Clutha or Molyneux, the most abundant river in the archipelago. Dunedin is the Gaelic name for Edinburgh.¹

Small Islands. — Stewart Island has an area of 1300 square miles and contains 300 inhabitants; it is the Rakiua of the Maoris. On the north, it faces Southland, the most southern and consequently the coldest division of South Island.

The Chatham Islands, containing together 625 square miles, with 218 islanders, rise to the eastward of South Island, on the route from Cook Strait to the Isthmus of Panama. They were peopled by a thousand Morioris, when, in 1835, some Maoris from the Taranaki coast made a descent upon the little archipelago. The New Zealanders who set out from their homes for the purpose of banqueting on the Morioris did devour them all with the exception of a very few families. To-day the Chatham Islands support only a few inhabitants composed of Morioris and men of the most diverse races; apparently, every people of the globe has sent some of its representatives to the Chatham Islands — with the possible exception of the French.

North-west of the northern island and at equal distances from New Zealand and New Caledonia, about 800 miles from the Australian Sydney, lies Norfolk Island. This isolated tract of land rising out of the vast ocean occupies only 17 square miles. It is a dependency of New South Wales. Seven hundred inhabitants dwell in the shadow of its magnificent araucarias and of its arborescent ferns, along a harborless coast. These are cross-breeds who were transported into the island in 1856. They formerly occupied the Polynesian reef of Pitcairn, where their race took birth toward the end of the last century from the alliance of English sailors with Tahitian women.

¹ The census of 1891 returns the entire New Zealand population as 668,181, of which 41,523 are Maoris. — Ed.

NEW GUINEA.

New Guinea or Papua: the Papuans. — The smallest of the continents, Australia, has as an annex the largest of all the islands¹ of the globe, New Guinea. In the north of Australia, at the extremity of a peninsula which few cattle breeders and planters have chosen to occupy, the perilous waters of Torres Strait dash against rocks, and coral reefs, and banks of sand. This shore, which has been a dangerous one ever since its discovery, is growing more and more so as new coral reefs are continually forming, and it must end by becoming wholly unapproachable for ships. There are 150 reefs to-day where there were only 26 in 1526.

Torres Strait lies between the continent and New Guinea, the latter an island 1553 miles in length, with a very variable width, the maximum of which is 400 miles. It embraces 303,200 square miles, and including small islands 311,965; it contains lofty mountains, which wear in places a tiara of eternal snow, and in these latitudes the snow-line is 16,400 feet above sea-level. An altitude of 16,730 feet is attributed to the Charles Louis Mountains, which rise in the body of the island. The Owen Stanley range, on a peninsula of the south-east, reaches an elevation of over 13,000 feet, and Mount Arfak, in the north-western peninsula, is from 9000 to 10,000 feet high. There has been no volcanic outbreak in the island since its discovery, but it is probable that the fiery mountains of Bismarck Archipelago may have neighbors and brothers here in the northern uplands, which have become German territory as have also the Bismarck Islands. In Dampier Strait rises an active volcano to the height of 5250 feet. A few lofty summits, one large stream, the Fly, which descends from the Victor Emmanuel chain, and which, like all the torrents and rivers, is skirted by forests of tropical luxuriance, woods, birds of the most brilliant plumage, plants and animals which resemble in a measure those of Australia, although the latter is a country of dry winds, open plains, and deserts, while Papua is a wet region, — this sums up our knowledge of New Guinea.

Scientists and travellers are, however, exploring the country at present. The English, or, more accurately speaking, the Australians, had begun to take possession of the eastern part of the little Papuan world, — the western belonged to Holland; they had annexed these fertile, unoccupied regions under pretext that France and Italy were regarding them with envious eyes; suddenly Germany, installing herself upon the northern coast, seized from her Saxon brothers nearly half their prey, — and New Guinea is now triply strangled by Europe.

Down to the time of these recent territorial arrangements,² the Netherlands alone had attempted anything here (after 1828); their sovereignty is wholly nominal everywhere except in a few coastal archipelagoes and certain districts along the shore, and if they should quit the island to-morrow every trace of them would disappear immediately. The same thing would be true (though with varying degrees of rapidity) in the other Hollandish Indies, if the army which guards them should return to Europe forever. Nothing is so unproductive and transient as a military power which confines itself to the mere work of subjugation and occupancy, and which has nothing back of it but fiscal agents with their tax-lists. Though it plant massive fortresses in the soil, its work is as vain as the figures traced on the shifting sands of the dunes.

¹ Excluding Greenland.

² Germany's occupancy dates from 1885. See page 899.

The only conquerors who make an ineffaceable impression are the men who wield the pick, the men who leave their bones in the fields that they clear.

It is supposed that 840,000 savages live here, in an easy fashion, — on a tract of land so long that if it were dropped down upon Europe with the extremity of its north-



PAPUANS LAUNCHING A CANOE.

western peninsula touching Brest, the south-eastern peninsula would terminate at Athens. These still pagan savages, the Papuans, are for the most part men of middle stature, having a complexion intermediate between black and yellow, a hue which recalls the warm color of certain dark olive-browns of Europe and the colonies. Fine features are not wanting among them, the nose is often of noble mould, the

beard black, abundant, and woolly; the hair is extraordinarily thick and frizzly. They are energetic, and possessed of impetuous courage and ardent good-humor; they have the beginnings of society, and they understand somewhat of the arts and sciences. But they are doomed to extinction. So long as they were confronted by no foreigners except the few Dutchmen settled in the west, in the territory which Holland claims, they were born, lived, and died as Papuans, but in the presence of English and German activity and aggressiveness they are now obliged to toil, to carry anxieties, to count the hours, — and they are perishing.

The portion of New Guinea which is controlled in a greater or less degree by Holland comprises all the west of the island; it is estimated to embrace 147,550 square miles, or nearly a half of the entire area, with 238,000 inhabitants, or a half of the population. England and Germany divide the rest between them; England occupies the south, with the broad valley of the Fly, behind a low, marshy, feverish littoral, which is wholly deficient in good ports; Germany possesses the north, lying back of a loftier, more healthful shore, cut into beautiful bays. The English have not yet named their part of the country, which includes 85,550 square miles with 489,000 inhabitants. The Germans have called their new colony, covering 70,130 square miles, Kaiser Wilhelms Land. It is thought to contain a population of 110,000.

Bismarck Archipelago. — At the same time that Germany took possession of the north-east of New Guinea, she placed under her protection the archipelago formerly called New Britain, a name which has just been superseded by that of Bismarck Archipelago. Although usually ranked among the islands of Melanesia, of which it is even the major archipelago, New Britain rises in the vicinity of New Guinea, near its eastern coast. It is peopled with Papuans, and is a natural annex of Papua, as it has been a political annex since the time when its destinies were joined to those of Kaiser Wilhelms Land. What names will the Germans give to the three great islands of the archipelago, to New Britain, New Ireland, and New Hanover, all bearing English titles to-day — even the last, for it was named in honor of the reigning house of England? At present the three old designations are still in use. New Britain, the island nearest New Guinea, is by far the largest; it covers 9650 square miles, about the same area as that of Sardinia or Sicily. It is often called Birara, but this native name is properly applied to a certain coast district and not to the entire island. A part of the littoral is low, swampy, pestilential, and deadly to the white man; but there are mountains and volcanoes which give elevated districts and cool lands to this hot, almost equatorial country cut by the 5th parallel of south latitude. Many of the volcanoes, numbers of which are crowded into the peninsula of Gloucester, the terminal horn of the island, are still active.

New Ireland is separated from New Britain by a strait which the English have named Saint George's Channel, like that which separates the true Britain from the veritable Ireland. This Tombara of the natives is nearer the equator than the major island of the group is — it approaches very closely to $2^{\circ} 25'$; it bears mountains of 6500 feet which are here limestone and there volcanic, but which are in fact but little known. Its 5000 square miles make it much larger than Corsica. The third large island of the group, New Hanover (570 sq. m.), rises 16 miles north of New Ireland, on the other side of Byron Strait.

It is estimated that these three islands, which are covered with excessively wet, luxuriant, and unruly forests, but which are destitute of the larger and nobler animals, give support and asylum to 190,000 vigorous, energetic Papuans. In former

times these men were noted cannibals. But at present they are constrained to abandon the precious customs of the good old days; English missionaries have made many a gourmet ashamed of his cannibal repasts, and Germany is present to prevent civil wars and banqueting on human flesh. They have, however, had many dainty dinners out of these missionaries. Their cannibalism aside, they are very intelligent savages, skilful workmen, cleanly in their persons, and dwelling in bamboo houses with coverings of pandanus leaves. They delight in painting their bodies as did the Picts and the Pictavs of Celtic race; stripes of yellow, red, white, and black, and a mass of hair shaped like a ball, or standing up like a fur cap, make the Papuans recognizable from a great distance.

The Admiralty Islands.—West and north-west of New Hanover, Germany has taken possession of other archipelagoes, and other islets and isolated reefs, notably of the Admiralty Islands. Vasco is the dominant islet among the 40 Admiralties, all of which are encircled by coral reefs, covered with cocoanut-trees and peopled with scattered Papuans. It rears a volcano of over 1600 feet. As the climate is extremely humid, the island is copiously watered.

Bismarck Archipelago, including the Admiralty Islands, certain small Sporades and Cyclades and isolated islands, carries Germany's recent acquisitions in these waters to 18,150 square miles, making, with her part of New Guinea, a colony of 88,280 square miles with 300,000 Papuans.

The Louisiade Archipelago.—Like Germany, England has also established a protectorate over the islands lying near that part of the New Guinea coast of which she has proclaimed herself mistress. Among these islands there is but one archipelago of any considerable value or size. This is the Louisiade.

Some of the Louisiade islands are so minute as to be nothing but reefs. They continue the direction of the large south-eastern peninsula of New Guinea on the 12th parallel of south latitude. They have been very little explored except around the bays of the coast, and it is as yet uncertain how many inhabitants are to be attributed to them.

MEGALONESIA.

The Most Favored of the Islands.—New Guinea may be regarded as an annex of Australia; at the same time it is the most eastern and the most extensive division of Megalonesia. Between Australia, Indo-China, and China, anchored in an equatorial sea, are magnificent, fairy-like islands, each with a retinue of smaller though not less magical isles. An entire world lies here, animated, vivified, and tempered by the ocean. We will call this world Megalonesia or Great Islands, in opposition to Micronesia or Small Islands, the title given to the lands scattered between Australia and the two Americas, over the broad bosom of the southern seas: in its turn Micronesia is ordinarily divided into Micronesia proper, Melanesia, and Polynesia. Europe has sway over all Megalonesia, here nominally and there in fact. Spain owns the Philippines, England creeps along the northern coast of Borneo, and Portugal has retained some little territory in Timor. Holland controls all the rest. Her islands are ranged like a squadron from the Strait of Malacca to New Guinea.

Megalonesia — Sumatra, Java, the Lesser Sundas, Borneo, Celebes, the **Moluccas**, and, on the north, the Philippines — may have once united the two continents between which these brilliant islands rise, perfumed by the waves. Then, except perhaps for a pass between Lombok and Bali, it was a sort of central Asia connecting North Asia with Australia or South Asia, as Central America joins the two halves of the New World.

Their sea, as beautiful and treacherous as the siren, is greatly to be dreaded: in 1883, a tidal wave rushed with tremendous fury over a hill 130 feet high, where a multitude of people who had fled from the shore were fearlessly contemplating the wrath of the ocean.¹ Their mountains are to be dreaded also, for these majestic cones are not quiescent craters. More than one of them vies in destructive activity with the most restless and fiery of the 500 living volcanoes of the world. **Megalonesia** comprises two physical regions. Broadly speaking, the western islands, those nearest Asia, possess forests of remarkable exuberance, which recall the growths of India and Indo-China; elephants, rhinoceroses, royal tigers, and grimacing monkeys abound here; and, beyond all these external resemblances to the great continent, we find civilizations and religions derived from the Asiatics. The eastern islands possess little or nothing in common with Asia — neither enormous beasts, nor felines, nor monkeys, but the kangaroo, the ornithorhynchus, and the eucalypti and the acacias of Australia.

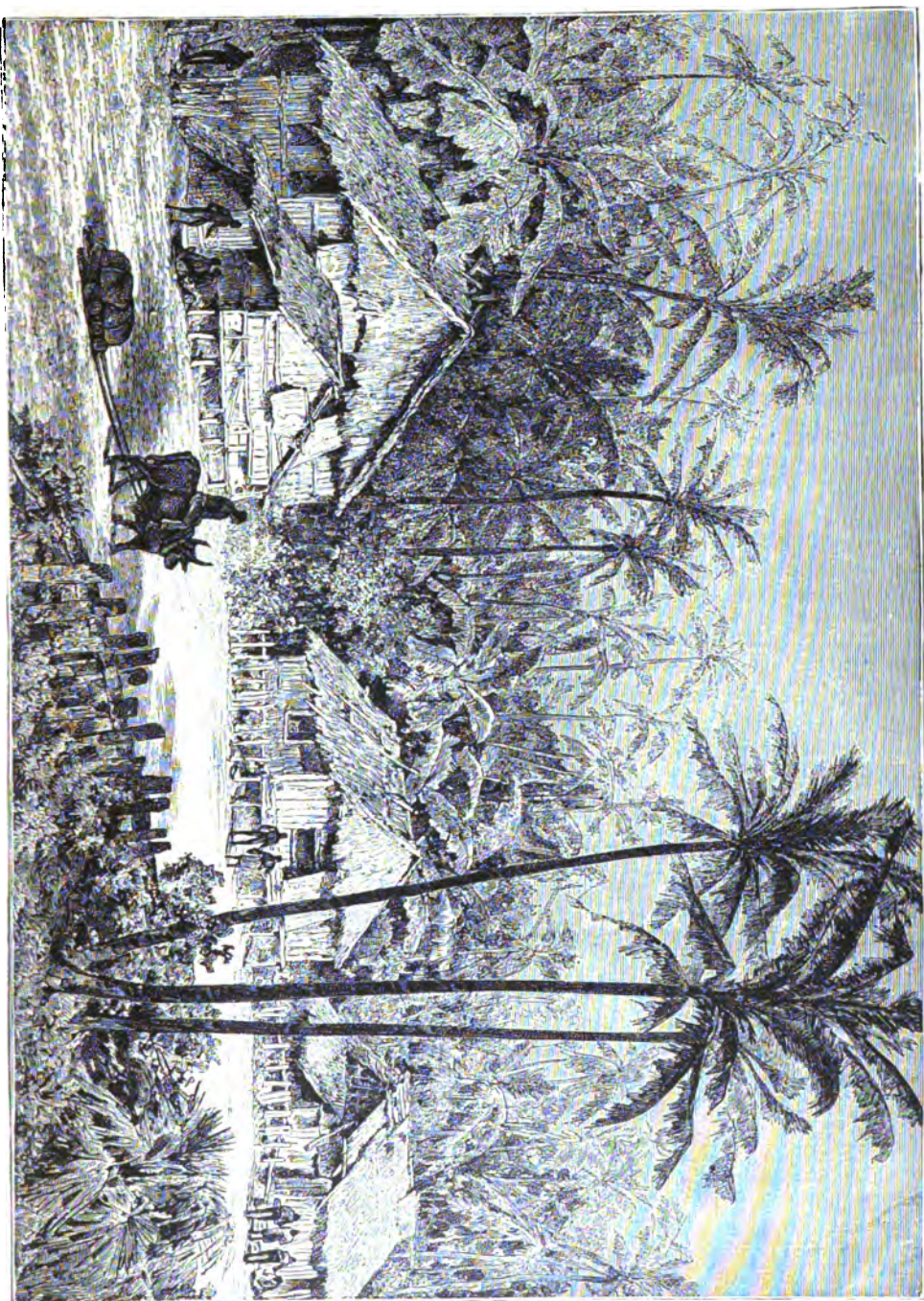
In the long and beautiful southern chain called the Sunda Islands, the Strait of Bali, opening between Bali, on the west, and Lombok, on the east, sharply divides Asiatic **Megalonesia** from Australian **Megalonesia**. It seems, however, that the contrast between these two groups of islands has been greatly exaggerated.

Negritos. — **Malays.** — **Chinese.** — **Europeans.** — The earliest inhabitants of these gardens of the equator are as completely unknown to us as those of any other country in the world. The most ancient among the still existing tribes on this trembling soil are the **Negritos**, who bear different local names. They are found here and there, dispersed and isolated, but always pagans and always savages. They occupy various valleys in the interior of several of the islands, notably in the northern portion of Luzon, the largest of the Philippines. As their name implies, they are of small stature with black faces; they are doubtless more or less nearly related to the native Australians and to the Negro tribes which the Aryan conquerors formerly found in the centre and south of India.

The **Malays**, whose origin is doubtful, invaded the islands occupied by the **Negritos**. They annihilated them or drove them back, or they mingled with them and absorbed them. For centuries now the **Malays** have been the important race of **Megalonesia**. They are divided in religion, but united by a very simple, rich, and sonorous language, which commerce has made the general idiom of this portion of the world; they are gaining on the allophones along all the frontiers, notably on the small remnant of the **Negritos**, and, in the east, on the **Papuans**. Far away in the Indian Ocean, fronting the Zambeze coast of Africa, the great African island of Madagascar makes use of a dialect of their language. These **Malays** have navigated all these seas, with very few shipwrecks: their large canoes are heavy and difficult to manage, but they never capsize.

Some of the **Malays** are pagans; others are Christians, especially in the Philippines, but by far the greatest number of them invoke the one God and Mahomet his prophet. Whatever religion these men profess who formerly bent the knee before

¹ See page 848.



NEGRO DWELLINGS.

the gods of the Pantheon of India, whether they are agriculturists, merchants, seamen, or pirates, whether they are ranked among civilized, half-civilized, or savage peoples, they are everywhere devoid of beauty. Their face bears the Mongol impress. They have small, blunt, flat noses, high cheek-bones, and black, slightly oblique eyes; their hair is black, their complexion of a reddish brown, their beards scant, their bodies thick-set, and their legs short. They are said to be treacherous, cruel, morose, sly, destitute of elasticity, and without breadth of intelligence: it is thus that we judge them; how do they judge us?

They ruled in Megalonesia when the Europeans arrived; first came the Portuguese, then the Dutch and the Spaniards, — and now these Malays no longer own themselves. They are more or less strictly, more or less loosely subject to the Whites. So far, the conqueror has not deprived them of any of the essential props of a race; he has learned their language more widely than they have learned his, and but very little of the so-called Aryan blood has been fused with the so-called Malayan, except perhaps among the Spaniards in the Philippine Islands. The Chinese, on the contrary, have been intricately mixed with the Malays, and the fusing process is still going on. The hot and brilliant climate of the islands is not at all trying to them, and they immigrate by thousands; as they take no pride in the nobility of their own lineage, they form alliances with Malay women, and the people springing from these two sources is increasing very rapidly. As it is so near southern China, which is the hive of the yellow race, Megalonesia may possibly become for China what North America is for the "Anglo-Saxon," and what South America is for the "Latin." Already every city in these archipelagoes has its Chinese quarter, every mine and every quarry has its Chinese miners and quarrymen, and it is thought that fully a million sons of Han live at present in Megalonesia, engaged in mining gold, tin, and other metals, cutting the valuable woods, such as teak, ebony, mahogany, and sandalwood, gathering camphor, peppers, cloves, nutmegs, and cinnamon, cultivating rice, working for the planters on the sugar-cane, cacao, coffee, and indigo plantations, — in short, doing everything, and doing it well.

The Whites, including the Dutch in the Hollandish colonies and the Spaniards in the Spanish colonies, are not more than a twentieth as numerous as are the Chinese; among both of these are cosmopolites from all the countries of Europe and America. At the present time there are more Whites in the Hollandish islands than in the Philippines, but in the latter the Spanish immigration, which is made up of people who are almost acclimated in advance, is increasing from year to year, and the cross-breeds will very soon constitute an important element in the population: this is not the case on the Dutch territory.

DUTCH ISLANDS.

The population of the Netherlands India is estimated at nearly 32 millions; it embraces about 720,000 square miles. Among these 32 million islanders, many are merely nominal subjects of the Dutch; Holland is not even acquainted with all the territory which she is reputed to control here. She holds her India possessions — embracing an area more than ten times that of New England — with a small army in which there are scarcely 15,000 Europeans; as for the White civilians, they are

rated at less than 53,000, nearly four-fifths of whom were born in the islands and about a sixth in Holland. The dearth of Europeans in these archipelagoes, which have been absorbing Europeans for centuries, is to be attributed not only to the unhealthfulness of the climate, but to the fact that the Dutch do not settle here with the idea of remaining: as soon as they have laid by even a small fortune, they return to their home in Holland,—and home to most of them means the province of Gelderland.

It is from the incomparable island of Java that Holland rules over this wondrously beautiful empire, fifty or sixty times as large as the mother-country, and seven times more populous.

JAVA.

Java, its Volcanoes.—Java, “the masterpiece of creation,” is a golden casket for the avaricious Dutchman. With Madura (2040 sq. m.), its annex, it supports more than 22½ million inhabitants on 52,125 square miles. The United States, as densely peopled, would contain about 1300 million souls instead of 63 million. It is said that in 1780 the Javanese numbered only 2 millions, and in 1810 they had increased to 4,800,000. Such unprecedented growth doubtless results in a measure from the profound peace which has long ruled over these favored valleys, and from the remarkable progress that cultivation has made under the superintendence of the Dutch. But the true cause of the development is perhaps traceable to the fact that there is no division of land in the island. Personal ownership of the soil is unknown; each family of a commune receives its share, which is proportioned to the extent of the municipality and to the number of children in the household. “The foxes have holes, and the birds of the air have nests”; and every Javanese has his part in the sunlight and soil, and the more children a father has, the more land he receives to cultivate.

Lying almost directly east and west, Java has a length of 620 miles, with a maximum width of 121. It is thickly studded with volcanoes, and rears at least one hundred summits which are still, or were once, active; and more than one of these seemingly dead mountains is now merely quiescent. As they run from end to end of the island, many of the *gunongs*¹ are visible from both seas, and sometimes they make all Java quake, sometimes they cover the land and the sea for long distances with ashes and sand, sometimes they pour down floods of lava on their own shoulders. Their lurid glare has won for the island the surname of the “eyelid of hell.” When from out of chaos the elements of nature harmoniously emerged, then Java, the beautiful, was born, say the Javanese. Vacillating, uncertain where to fix itself, a supernatural power seized it and nailed it to the centre of the world; the head of the nail, near Magelang, is the hill Tidar. In the west, in the country of the Sundanese, the mountains are closely set, but in the east, in the Javanese district, they are more independent and lordly, and more beautiful, with broader plains and more ample valleys at their feet, and with longer and wider streams.

It is in this eastern portion that the mountain of Semeru, the highest peak in the island, rises to an elevation of 12,336 feet; with the exception of Kilauea, in the Sand-

¹ A Malay word meaning “mountain.”

wich Islands, the crater of Semeru is the most extensive in the world. It is in this east also that the Solo and the Brantas, the largest and the most important rivers, are to be found. However, although the Javanese region supports the loftiest mountains and unfolds the mightiest rivers, as it is exposed to the dry winds from Australia, it is less humid, less brilliant, and less opulent than the Sundanese region. At the base of the volcanoes, along the coast, in the valleys and glens, as high up as 2000 feet above the sea, stretch the Hot Lands of Java, which are now nearly stripped of their forests, and whereon is grown the rice which supports the islanders; there the sugar-cane flourishes, and there thrive all the plants which constitute the fortune of the planter; above this region, to a height of 4600 feet, are the Temperate Lands, in which are vast forests abounding in teak, a tree which furnishes excellent ship-timber, and which withstands decay for an unprecedentedly long period; in the clearings of



A BAMBOO BRIDGE, JAVA.

the Temperate Lands coffee is grown. Higher still, in the cool districts, the forest also prevails, on the *batu-angas* or "burnt rocks," that is to say, on the lava-streams. Java resembles the Latin countries of the Andes in these different climatic terraces, but its woods, out of which the tiger issues to claim a tribute from the hamlets, remind one of India and Indo-China.

From the lofty Javanese summits nothing is to be seen, then, but almost equatorial forests and gardens, — the island being about equidistant from the 5th and 10th parallels south latitude. When the Javanese worshipped the forces of nature, the sun and stars, whirlwinds and thunder, and later, when (after the first century) they became Brahmanists, and after that Buddhists, before adopting Islamism, they revered their volcanoes as the most formidable agents of the destroying power. These mountains smoked above valleys where thousands of pilgrims bowed before their deities in magnificent temples which were an honor to the Javanese art. At the close of the fifteenth century, the date of the final triumph of the Koran in the island, the architectural monuments inspired by the genius of India began to crumble; their remains have not all disappeared, and in many places in the depths of the forests imposing ruins are still to be seen.



A BASKET-PEDLER, BATAVIA.

In the centre of Java, the weight of centuries is crushing marvellous structures; the luxuriant vegetation is shattering bricks, stones, palaces, fortresses, temples, aqueducts, baths, and tombs. Statues of enormous size are falling hour by hour, and every second sees effaced some line from the countless bas-reliefs chiselled in ancient times, by legions of artists, in the hard trachyte. Brick roads, which once led from temple to temple and from city to city, are to-day hidden in the grass, broken by roots, and moulded by the rain dripping from the overhanging forests.

The Javanese, their Language.—The Javanese, who owe their origin to the trituration of tribes that were brayed by war and amalgamated by marriages into a Malay people, are divided into three small nations, namely, the Javanese in the centre, the Sundanese in the west, and the Madurese in the east and in the adjacent island of Madura. Well defined racial and dialectical differences exist, as well as differences in mental endowment and disposition. The Javanese are said to be physically better made than the other nations; the Sundanese, who are of small stature, are the gentlest and are morally superior to the other two; the Madurese are the most energetic and proud-spirited. All three nations are olive-colored, ugly-featured, and almost beardless. The most numerous and most powerful, the one which India has had the deepest influence upon both physically and mentally, the one whose language is extending and whose customs and ideas are spreading, is the Javanese, numbering 14 million souls; the Sundanese are rated at 6,000,000, and the Madurese at 2½ million. Their idiom possesses one dead and three living dialects. The three living are called the Krama, the Ngoko, and the Madja; the dead language is known as the Kawi. The Krama is the aristocratic or court speech, the Ngoko is the popular or "thou"-ing speech, and the Madja is a sort of compromise between the other two. The nobles speak to the commonalty in the language of the commonalty, the commonalty address the nobles in the language of the nobles; and, in accordance with clearly understood regulations of etiquette, every Javanese plays the part of nobleman or commoner to his interlocutor. Madja is employed by those who stand to each other on an equal and friendly footing, or by those who feel little constraint of etiquette. The Kawi is the language of the old inscriptions and manuscripts. It grew out of a mixture of the Malay tongue with the Sanskrit brought into the island by the Hindu invaders: it is Malay in its syntax and movement and Sanskrit in its roots. It was this old tongue that made the Javanese lyre vibrate in the nation's youthful days with masterpieces, great religious poems, invocations, odes, and tragedies or comedies, and it continues to be employed by the poets of Java, Madura and Bali, especially by dramatic writers.

Although the Dutch have ruled for centuries in the island, from the seaside towns to the loftiest mountain-hamlets, the guttural Netherlandish tongue is but very slightly spoken here. Until quite recently, Holland has gathered large revenues from this portion of her domain, under what is known as the "culture system," the native peasantry being obliged to work for the government for a certain number of days every year, and to cultivate plants for the government at its own prices. Java is a gigantic factory, of which the natives are the hands, the 40,000 to 45,000 Dutch and Europeans the foremen or overseers, and Holland the patron. The 234,000 Chinese succeed in every business that they engage in, from the most obscure trade to the most complicated banking enterprise.

Batavia (pop. 101,000), founded by the Portuguese on Malay territory belonging to the Dutch, bears a name which is neither Portuguese, Hollandish, nor Malay, but

which means Holland in Latin. In the seventeenth century, this capital of the Dutch East Indies, built on a shallow gulf and along canals, vied in opulence with the chief commercial cities of the world ; its wealth has decreased remarkably. The Europeans have ceased to inhabit the old city of Batavia, which is very unhealthful ; they have removed their dwellings to some little distance from the coast, where they occupy, along the river Tjiliwong, a delightful suburb called Weltevreden — at the same time a city and a park. The governor resides in the uplands of the interior, at Buitenzorg or Sans-Souci, a deliciously cool, shady town, more charming than Weltevreden itself.

Sourabaya (pop. 132,000) lies at the eastern end of Java, opposite the Island of Madura. The harbor is the best in the island, and it is here that the government



A STREET IN BATAVIA.

dock-yards and arsenals are situated. The river of Sourabaya is navigable for boats far into the interior, and enormous quantities of rice, sugar, and other products are brought down to the coast on it.

The most remarkable Javanese ruins are shown, or we might rather say concealed, in the division whose principal cities are Surakarta and Djokokarta. North of the latter town are four alleys guarded by stone monsters and leading to the four corners of the temple of Burubudur, which, down to the present time, has defied man, the forest, volcanoes and earthquakes, and all other agents of destruction. Burubudur stands on an artificial hillock, within sight of the volcano of Merapi (9209 feet). It is an immense granite pyramid, built without mortar and rising in seven terraces, the whole surmounted by a dome. Within and without, and running in all directions from the top to the bottom, is unfolded a carved epic, an unheard-of quantity of bas-reliefs consecrated to the history of Buddha, who is the soul of the temple, and who is honored here with 4000 statues occupying 4000 different niches or small open-work spires. Such is this prodigious monument, the glory of the ancient Javanese and the shame of the modern — this nation of 20 million slaves, who now build nothing but huts. The vast ruins of Brambanam rise near the railroad from Djokokarta to Surakarta ; Gunong Prau is about 37 miles south-east of Samarang (pop. 72,000) ; as for Kediri and Malang, they can be reached from Sourabaya.

SUMATRA.

Sunda Strait. — Between the western projections of Java and the south-eastern capes of Sumatra runs the Strait of Sunda, whose waters do not always slumber, gently rocked by the flow and ebb of the tide — the breathing of the ocean. In 1883, while the volcanoes which they lap were belching forth fire and ejecting stones and ashes, and the mountains of Java and Sumatra were sending back a responsive glare, while all this corner of the earth was quaking to its very foundations, the waters of the strait rose in a mighty tidal wave, at the same time that islets and islands sprang into the air or sank into the deeps; a flood rushed upon the cities along the coast with all the might and weight of the sea, and with the depth and darkness of the abyss; with one supreme effort, it swept over high hills,¹ and tens of thousands of men perished. Such was the catastrophe of Krakatoa, so called from an island in the strait from whose fiery summit the eruption began which ended in all this ruin. According to a Javanese tradition, Java was divorced from Sumatra only about a thousand years ago. The strait is not more than 12 miles broad in its narrowest portion, and at that point the water is studded with islands.

Sumatra: its Mountains and its Peoples. — **Littoral Islands.** — Sumatra faces Borneo from a distance; the peninsula of Malacca, reaching down from the Asiatic mainland, is separated from it by a narrow, shallow strait which was formerly obliterated here and there by groups of islands.

Including dependencies, Sumatra embraces from 170,000 to 174,000 square miles; the equator divides the huge island almost exactly in the middle of its 1050 miles of length; its greatest breadth reaches 210 miles. The climate is excessively hot but rainy,² and mighty rivers flow down from the mountains and plateaus; the country stretching at the foot of the lofty gunongs (many of which are volcanoes, either living, extinct, or quiescent) is all the more fertile for the heat and humidity. Of the nineteen volcanoes at present known, seven are active. The chief of these, the Gunong Korincha (12,139 feet), bears another and more beautiful name, Indrapura, Peak or Son of Indra; its crater has a circumference of 5575 feet and a depth of 2625. Near the equator rise Singalang, Merapi, and Ophir. The granitic cordillera out of which these mountains tower runs very near the western coast, plunging almost perpendicularly into the sea, with very short torrents and no plains; but on the eastern slope are long streams, ample fields, and boundless forests through which roves the grave and grotesque orang-outang. Among these streams are two of some considerable size, the Batang Hari or the River of Jambi, which is navigable for small steamers for 375 miles, and the Musi or the River of Palembang. In the miry streams the stupid but cunning crocodile flounders: the largest³ and most ferocious species of this animal are to be found here; in the Palembang district alone, a thousand men, it is said, are killed yearly by them. Some of the torrents from the uplands drain large and beautiful lakes; the most extensive of these sheets, Lake

¹ One wave drowned a multitude of people who had taken refuge on the top of a hillock 120 to 130 feet high.

² The rainfall varies greatly according to the situation; Padang, 2500 feet above sea-level, on the western slope, is in by far the most humid region.

³ Specimens 25 feet long have been seen.

Toba, lies at an elevation of 2950 feet. Lake Singkara, in the country dominated by Singalang and Merapi, discharges its surplus waters through the Indragiri.

The Sumatrans consist of Mussulman or pagan Malays, living in the "Great Empire" of Jambi, which is traversed by the Batang Hari, and in the valleys of the eastern slope on the north-west of Jambi toward the river Rokan; of Lampungs near the Strait of Sunda; of the Rejangs of Benkulen; of the cannibal Bataks occupying the plateau of Toba, around the great lake and on the two slopes stretching down to both seas; and lastly of the restive, warlike Achinese, who dwell in the extreme north-west of the island: every Achinese is a soldier, and every village has its little army, which is bound to present itself equipped for service at the outbreak of war.



THE BATANG HARI NEAR JAMBI.

It is said that there are in all eleven tribes in Sumatra, but the number of inhabitants is unknown. There are nevertheless some millions, eight according to some authorities, six according to others, or possibly not four; this Maylayan island is longer but narrower than Madagascar, which is also Malayan, though in a different degree and in a different sense. Sumatra is Malayan because the Malays occupy as much of its territory as do all the other nations combined, or even more, for they are gaining, at the same time with their language, in the west of the island. The Sumatrans are, however, of singularly diverse descent. To speak of the 1,200,000 (?) Bataks and the Achinese alone, these two peoples spring evidently from a fusion of various insular and continental races; the Bataks, who are fine-featured and of noble bearing, perhaps resemble the Whites more than they do the Malays (all mixtures aside).

The Dutch rule, officially or otherwise, over the larger part of Sumatra, although they have left a false show of independence to a few of the empires and sultanates. They are attempting to conquer the only openly free state of the island, Achin, or Aceh, on the north-west; but their patience, discipline, and sagacity, their cannon and ships, as well as rivers of blood, have as yet failed to wholly subjugate this little sultanate, peopled with perhaps 400,000 or 500,000 Achinese, or possibly with a million (?), or even one and a half million (?) according to the most generous estimates. The Netherlands have to contend here against the pestilential atmosphere of swamps and wet forests, against the difficulties of pathless mountains, and the fanaticism and fatalism of the Mussulman Achinese, who are very sharply divided from the rest of the Sumatrans by differences of lineage and language: the Achinese tongue is attached to the Polynesian trunk. The best portion of Dutch Sumatra, that part where agriculture is carried on most extensively, where there is the largest number of coffee-plantations and other plantations of the tropics, is the Padang district, a narrow margin on the west of the island, backed against the chain in which Indrapura dominates; but the metropolis, Palembang (pop. 50,000¹), belongs to the eastern slope; it is built on both banks of the river Musi, about 50 miles from the mouth, at the fork of the delta; many of the native dwellings float on the river, supported on bamboo rafts which are anchored to the shore and which rise and fall 10 to 16 feet with every tide.

Nias. — Banca. — Billiton. — Out of the bosom of the boundless deep sweeping away to the south-west of Sumatra rise mountainous islands. Running from north-west to south-east parallel to the cordillera of Sumatra, they are: Simalu, peopled with Achinese, the Banyak Islands, Nias, the Batu Islands, and the Mantawi. Nias, the largest, has an area of 2523 square miles; its inhabitants are estimated by some at 250,000, by others at more than 500,000. They inhabit sandstone mountains from 2000 to 2300 feet in elevation, coral islands upheaved to varying altitudes by volcanic outbursts, and fertile glens and valleys stretching along rivers which are filled to the very brim by 200 rainy days per year. Nias is linked to the Batu group in the origin and language of its inhabitants.

Banca, the principal island on the opposite coast, faces the delta of the Musi, from which it is separated by a narrow strait; it is only moderately fertile, although the rains are copious and forests are abundant. None of its gunongs reaches an elevation of 3300 feet. There are only 78,000 inhabitants on Banca's 4900 square miles. The Mountaineers (Oranggunong) are the remnant of a more or less autochthonous race which was found here by the Malay invaders, and which was overrun and trodden down by the latter; then, there are the Malays, who are more numerous than the people whom they supplanted, and 23,000 Chinese, who are engaged in the tin-mines, from which an excellent tin is extracted.

Billiton is separated from Banca by Gaspar Strait; it resembles the latter island in the mediocre elevation of its mountains, — none of which surpasses 2000 feet, — in its climate, its forests, and its tin-mines; it has likewise seen its aborigines driven back into the interior by the Malays and the Chinese; it contains only 38,000 inhabitants on 2500 square miles. It lies at almost equal distances from Borneo and Sumatra.

¹ Great discrepancies exist in the various estimates of the population of the principal cities of the East Indies, arising apparently from differences in the area embraced. — Ed.

THE LESSER SUNDA ISLANDS.

Bali.—A very slender strait separates Bali from the eastern extremity of Java. Bali was probably sundered from Java by an outbreak of volcanic force in 1204, and the 500,000 Balinese who occupy its 2000 square miles are Javanese, or more especially Madurese, in race and language; they are, however, distinguished from the Javanese by the fact that they remain faithful to the “teeming” religions of India, which the Javanese abandoned for the simple, severe religion of Mahomet; they are Brahmanists or Saivaists, with some few Buddhists, and certain ideas and institutions of India have retained a slight degree of authority among them.

The surface of Bali is lofty; the culminating peak, Gunong Agong, or the Peak of Bali, an active volcano, is said to be over 11,000 feet high. The climate is very rainy, and the island is copiously watered and exuberantly fruitful: rice, on which the inhabitants subsist, grows two crops every year. All the rajahs or sultans are subject to Holland.

East of Bali, the Strait of Lombok—through which flows a swift, deep current, with a breadth of 12 to 16 miles—separates Bali from Lombok, and, at the same time, the islands which are by nature attached to Asia from those which have an air of resemblance to Australia.

Lombok.—This island of 2100 square miles rises as a colossal volcano, the principal summit of which, called Gunong Rinjani, has an elevation of 13,708 feet. The climate is dry, but numerous torrents, which the inhabitants have turned off into canals, pour life-giving floods over the terraced fields, evoking fertility; the tiger, which is unknown in Sumbawa, the next island on the east, stealthily watches the other animals in the woods of Lombok. In the uplands of the interior dwell the Sassaks, who are Mohammedan Malays, and around the coasts are Brahmanist Malays who formerly came from Bali: in all there are about 300,000 men here under the suzerainty of Holland. The water between Lombok and Sumbawa is called Allas Strait.

Sumbawa divides its territory of nearly 5800 square miles among Malay chiefs, holding their suzerainty from Holland. Its volcano, Timboro or Tomiboro, is now only about 9850 feet in elevation, but previous to the eruption of 1815, which is one of the most dreadful recorded in history, it had an altitude of fully 14,750 feet: this great eruption began on April 5 and did not terminate wholly until the following July; the cone cracked and fell; the sound was heard at Ternate over 900 miles distant in one direction and at Benkulen, a city 1100 miles away in the opposite direction, on the western coast of Sumatra; it was also heard in Australia and Borneo. In full day, a pitchy gloom enveloped the land and the sea to a distance of 300 miles, and over all this ocean of beautiful straits and vast marine lakes floated the pumice-stone and ashes ejected from the jaws of the angry gunong; it is said that 50,000 men perished, either by the catastrophe or by the famine and epidemic which followed; a lake slumbers to-day in the depths of the crater. Tomboro is not Sumbawa's only enemy; the inhabitants also live in dread of Vader Smid.

The 150,000 inhabitants attributed to Sumbawa are Malays, who are thought to be related to the Bugis of Celebes. The island is not healthful. The waters are unwholesome, and the land, which is dry and sterile, bristles with spiny plants.

Sumba and Savu.—Sumba is also called Chindana, and, on account of the abundance of the odoriferous tree called sandal-wood, it also bears the Hollandish name of Sandelbosch. The Sumbanese, who are in a measure independent, in a measure subject to the Dutch, belong to the same race with the people occupying the western part of Sumbawa. Sumba and Sumbawa are, moreover, one and the same name. Together with Savu, an island lying a short distance to the eastward in the direction of Timor, it embraces 4386 square miles, with 200,000 inhabitants. The islanders of Savu are a handsome race, and appear to be a mixture of Malays with Arabs or with people from India.

Flores.—Holland has built a few forts on Flores (a Portuguese name), but very few Dutch have settled there. The 7720 square miles of this narrow island—233 miles in length from east to west—are inhabited in the interior by stalwart Negroids who resemble the Papuans of Timor and New Guinea, and on the coast by Malays, especially by Bugis from Celebes. The “black Portuguese,” that is, the half-caste descendants of Lusitanian settlers and native women, still recall the triumphant passage of the “sons of Lusus” over this land. These cross-breeds are becoming less and less Whites and more and more Malays or Blacks, but they are still recognizable by the cast of their features.

There are six active volcanoes on the island, the lordliest of which, Gunong Keo, reaches an elevation of 9065 feet.

From Flores, formerly Ende, to Timor, the navigator encounters Solor, Sabrao or Adenara, Lomblem, Pantar, and Ombay (850 sq. m.).

Timor.—Timor, the most extensive of these small islands, is supposed to contain 600,000 inhabitants on about 26,850 square miles. This estimate includes the adjacent islands, which are more or less closely crowded against the coast, and among which may be mentioned: Rotti, whose fine race of inhabitants is supposed to have been formed from the alliance of Malays with Arabs or Hindus;—Pulo Kambing, a mere volcano, 10,679 feet high;—Wetter (1275 sq. m.), a large sterile volcanic island;—Roma, equally volcanic and equally arid;—Kissa (or Jetewawa), which has a population of only 700, gathered in seven villages, but which possesses some celebrity on account of its 350 pseudo-Dutch inhabitants, who are descendants of the Netherlanders, French, and Germans brought here as soldiers after 1665 by the Dutch East India Company: little that is European remains to them except their names; some of them, however, have light hair and blue eyes, and a complexion which is neither black nor yellow. They are polygamous, and are becoming more and more infused with native blood; they are entirely ignorant of the Dutch language, and speak the idiom of Kissa; some, however, making use of Malay.

Timor is of volcanic formation, but it seems to have few active volcanoes at present. Timor Peak has been quiescent since 1638, but Lakulubar and Bibiluto, in the north-east, have recently given proofs of life. Among the mountains, which are for the most part naked or mottled with patches of dried herbs, is Gunong Allas, rising above the south-eastern coast to a height of 11,811 feet. The soil of the island possesses little fertility, and the sky is miserly with its rains: the forests, which are neither varied nor leafy, remind us of the Australian woods, especially by their lofty eucalypti.

The Dutch occupy the south-west, where dwell the essentially Timorese tribes; their capital is Coupang. It is in Timor that Portugal governs in an indifferent fashion the paltry remnant of her ancient domain in the Indian Ocean; she possesses

the north-east (with Pulo Kambing) ; Delli is the seat of the Portuguese government. The peoples nominally subject to the Portuguese belong to the Teto family. The Teto and the Timorese, split up into divers tribes, speak about forty different languages.



A BIRD OF PARADISE.

They are often at war with one another, clan opposed to clan, and tribe to tribe. They resemble very closely the New Guinea Papuans in complexion, features, and hair, and in impetuosity of disposition ; there is certainly nothing Malayan about

them except for some inconsequential mixtures. Along the shores and in the European settlements, we find Malays, Papuan and Malay or Hindu half-castes, a few Chinese, and a small number of Whites. Among the Lusitanians, the "black Portuguese," who are in fact very black, are descendants of the Lusitanian conquerors and the women of Timor.

From Timor to New Guinea. — The Serwati Islands dot the bosom of the sea between Timor and the archipelago of Timor Laut.

Timor Laut. — This Malay word signifies the Flower of Timor. The cluster of islands to which the name is given bears also the appellation of Tenimber; until recent years this land was supposed to be a single island. It is occupied by Papuans, as are also the Aru and Kei groups. The wooded islands of Timor Laut, Aru, and Kei contain possibly 60,000 inhabitants on something less than 5400 square miles.

Aru. — The coralline island of Aru is also called Tana Busar or Great Land: and, in fact, compared with itself, the islands of its archipelago are mere islets. It is 106 miles long and 22 to 47 broad; the 25,000 inhabitants occupy an area nearly equal to that of Corsica. On this strange island, the Papuans and pre-Papuans — who bear a likeness to the Blacks of Australia — remain faithful to their old gods. Tana Busar is divided into six low lands, by five salt-water channels, or rivers, 650 to 2600 feet broad and 10 to 16 in depth. These six lands are called from north to south Vurialao, Kola, Vokam, Kobror, Maikor, and Tarangan. Deep forests hide in their sombre recesses the bird of paradise, the kangaroo, and the flying or bounding game which that infallible marksman, the Papuan, pierces with his arrow; these forests extend equally over the flat lands of the north and centre and over the limestone hills plunging into the sea, on the south, by cliffs on which the islanders seek at perilous heights the edible bird's-nests. There are Chinese and Bugis residing at Dobbo, a commercial town on a little island in the north-west; they open stores here for the purchase of the bird's-nests, pearl-shells, tripang and tortoise-shell, which are brought to them by the Papuans of the eastern islands. Here too we find Lusitanian words in the language, and many an Aruese shows by his features that the islanders of Aru allied themselves in former times with the proud people of Guimaraes.

Aru is attended by a cortege of 83 small islands. It is only 93 miles from this group to New Guinea; a deep sea stretches between, but the identity of the animals, plants, and insects proves that these lands were once united.

Ké or Kei. — The Ké archipelago, which lies fully as near to the small New Guinea continent as do the Aru islands, defiantly faces the ocean with perpendicular limestone cliffs. Great Ké covers 260 square miles, Little Ké 200; then follow 25 islets or small islands. The 19,000 inhabitants, all pagans with the exception of 5000 Mussulmans, are occupied in cutting the woods of their forests, which are said to withstand decay longer than teak itself; these men are also wonderful boat-builders; they supply the traders to New Guinea and Aru with praus of various sizes; their tools are the axe, adze, and auger, and in their vessels, which are built without the use of iron, the planks are securely fastened by pegs and attached to the internal ribs by rattans; they are very easy and defy the tempests with perfect safety.

A few Portuguese words remain in the Malay dialect used by the mixed and not very numerous population of Ké, who give to their islands the name of Evar, Kei being a Malay name.

Such are the lands which break the sea between the Indian Ocean and the shores of New Guinea. Returning from New Guinea to the Indo-Chinese shore by a more northerly course, we encounter first the Moluccas, then Celebes, a vast island with superb indentations, and finally the immense mass of Borneo.

THE MOLUCCAS.

The Moluccas rise out of a wondrously beautiful sea of a deep blue color. They comprise the three large islands of Gilolo, Ceram, and Bouru, and many small islands, the best known of which are Ternate, Tidore, Amboyna, and Banda. The Moluccas are also called the Spice Islands, from their nutmegs, cinnamon, ginger, and cloves, which have been judiciously exploited by the Dutch. The archipelago is more or less loosely attached by islets and reefs to New Guinea, the Philippines, Celebes, and Timor.

Gilolo. — The fantastically shaped island which the inhabitants call Batotsima, its neighbors Halmahera (Great Land), and which we name Gilolo, is almost a complete reproduction on a small scale of Celebes, which lies about 150 miles to the westward; Celebes is eleven or twelve times as large as Gilolo.

Gilolo (6433 sq. m.) is composed of four peninsulas radiating from a common trunk like spider's legs. It is burdened with mountains and covered with tropically luxuriant forests, — the equator cuts this rainy Halmahera. The mountains are volcanic; the most destructive of all the peaks is Gunong Kanor, and this favored and miraculously opulent land, whose capes plunge into a sea where the waves whiten against coral rocks, is often rudely awakened from its equatorial languor by the quaking of the soil and by ejections of lava and showers of ashes. The very word *Gunong Kanor* proclaims that Gilolo has entered the Malay orbit; it is a long time since its inhabitants ceased to be composed solely of Haraforas or Alfures, — people allied either with the Papuans or the Dyaks. These Haraforas, who are tall, of a rather light hue, and slightly bearded, are vivacious and frank in their manners, and of joyous disposition. They hunt and fish, and cultivate the soil in one of the four peninsulas; all of the rest of the island is occupied by Malays, who invoke God and Mahomet his prophet. Including its large annex on the north-east, called Morotai or Moro, Gilolo is supposed to contain 120,000 inhabitants.

The Malays and Alfures here are subject to two masters who are under the suzerainty of Holland: on the north the Sultan of Ternate, on the south the Sultan of Tidore. Along the western coast rise, from north to south, Ternate, Tidore, Mareh, Motir, Makian, the Kaioas, and Batchian, once famous clove-bearing islands.

Ternate. — Ternate, whose surface often quakes, sometimes lights up the littoral of the large neighboring land with the lurid glare of its volcano: "Behold Ternaté and Tidore, with their burning top belching forth billowy flames; behold the trees bearing pungent cloves, which Portuguese blood will one day buy! In these islands there are golden birds that never alight on the earth: man never looks on their living forms." It is thus that Camoens writes of two of these islands.

A few Dutch are to be met here, a few Mohammedan Malays, — whose tongue bears evidence of some slight racial mixtures in early times with the savage natives

of Gilolo,—and also a few “Orang sirani,” or Nazarenes: these last, who are descendants of the early Portuguese settlers, speak Malay with a considerable intermixture of Portuguese words; they have not renounced their Christian religion. Ternate and Tidore, together, including a number of islets, embrace only 110 square miles, with 30,000 souls. These are the true Moluccas.

Tidore, Mareh, Motir, Makian, and the Kaioa Islands.—In Tidore, which is a beautiful pyramidal volcano, the inhabitants are Mohammedan Malays.

Mareh and Motir both consist of rugged volcanic hills surrounded by fringing coral reefs.

Makian slumbers in the shadow of a mountain which was diminished in 1646 by a great eruption which blew up the cone, leaving a huge chasm on one side of the crater, and destroying most of the population. That its fires are not yet extinct was conclusively demonstrated in 1862, when an outburst of volcanic force carried its ashes as far as Ternate, 50 miles to the northward, and once more destroyed nearly all the inhabitants.

In the Kaioa group, also girdled with coralline reefs, the islanders are Malays crossed with Papuans, and Islamism is the prevailing religion.

Batchian.—Volcanic Batchian (836 sq. m.) is larger than its sister islands; it has hot springs and geysers like those of Iceland, New Zealand, and the Yellowstone National Park. Notwithstanding its mineral wealth, its coal, its dammar, its forests, and its great natural beauty, there are few inhabitants along the coasts, and almost none in the lofty mountains of the interior. The Mussulman Malays of the island speak a hybrid idiom,—a Malay dialect veined with Papuan. Beside the Malays, there are a certain number of “Orang sirani,” who are distinguished from the other inhabitants by their Christian religion, their complexion, which is browner than that of the Malays (but their features have some European characteristics), and by their Malay language, in which a few Lusitanian words are still heard. Annexed to Batchian are Tavalli (120 sq. m.) and Mandioli (66 sq. m.); including these two islands, the population possibly reaches 25,000.

Obi.—Obi, which is but slightly inferior to Batchian in size, springs out of the waves south of the latter, in the little Moluccan Mediterranean, that is, in the sea included between Gilolo, Ceram, and Bouru.

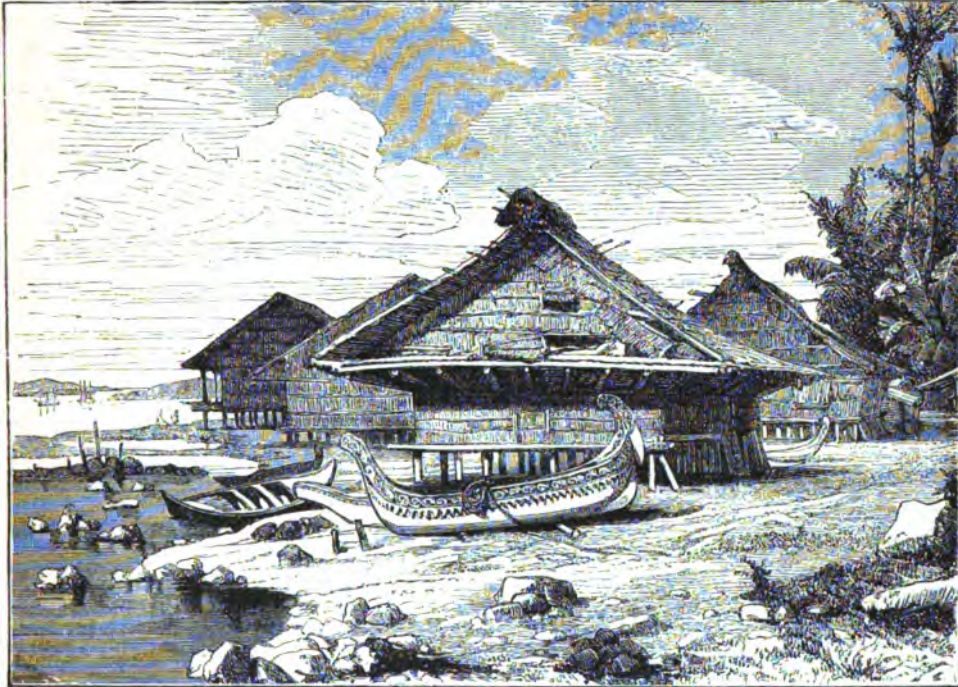
Damar, Gebi, Morotai, Rau.—But for a very narrow strait, Damar (36 sq. m.) would be connected with the southern capes of Gilolo.

Gebi, with a length of 25 miles and a breadth of 3 to 5, rises between one of the two eastern points of Gilolo and the New Guinea archipelago.

Morotai or Moro (1042 sq. m.), a mere heap of sand encircled by coral, must have been once connected with Halmaheira; it is the largest annex of the latter. Near it lies Rau, which covers something over 100 square miles.

Bouru.—Bouru (1275 sq. m.), lying between the Molucca sea on the north and Banda Sea on the south, is only thinly peopled along the margin of its mighty forests and in the shadow of its almost unknown gunongs; the island itself, being but nominally subject to the Dutch, is in fact nearly an unknown land. It gives asylum to Mohammedan Malays and to Haraforas, who are related to those of the island of Gilolo. According to the common interpretation of certain traditions of the Tonga Islands and of the Samoa group, it was from Bouru that the flotilla was launched which is said to have borne the founders of the small Polynesian peoples dispersed throughout the South Sea.

Ceram, Mysol, Waigiou. — East of Bouru lies Ceram, or, more accurately, Serang or Sirang. The island, which is entirely covered with forests, is destitute of human habitations except along the coast, where the people occupy themselves in raising cacao and coffee, or live wholly without work in the shadow of the sago-palm. The total population is estimated at 100,000 souls, and the area at about 7300 square miles. Ceram contains superb valleys, and gunongs from 6500 to 10,000 feet high, which run from west to east along the 220 miles of length of this narrow strip of land. The territory is parted among numerous Malay sultans who hold their investi-



A VILLAGE IN CERAM.

ture from Holland. These petty Mussulman princes tyrannize over the Alfures, as do those of Bouru and Gilolo.

Mysol, 60 miles north of Ceram, on the way to New Guinea, bears a certain likeness to Ceram; it has Malays along the littoral, and Alfures in the interior, who show unmistakable evidences of affinities with the great race of the New Guinea Papuans.

In the same way in Waigiou, which is separated from New Guinea by Dampier Strait and from Gilolo by Gilolo Passage, the proletariat consists of Negroids and the aristocracy of Malays. Mysol and Waigiou contain together scarcely more than 15,000 souls, on about 3000 square miles.

Amboyna. — Near the cape at the southern extremity of the western peninsula of Ceram lies Amboyna (the Malay Ambun), composed of two sections joined by a narrow sandy isthmus. It is a diminutive Java from which the Dutch draw large profits; the red soil, into which the coral penetrates, derives its fertility not so much from its own ingredients as from the copiousness of the rainfall — 18½ feet per year.

The nutmeg-tree grows here in all its vigor, but the entire island is by no means under cultivation; there are still broad wooded tracts in the uplands where the volcanoes have become extinct. There are 60,000 inhabitants on Amboyna's 275 square miles; these are first of all Malays, then Malay and Papuan cross-breeds, Chinese, Dutch, and "Orang sirani." The governor of the Dutch Moluccas resides in the city of Amboyna, which contains a population of 13,000.

The Banda Islands. — The Banda Islands rise out of an extremely deep sea, about 60 miles south of Ceram. They bear the most famous nutmeg-trees in the world. In this climate, which is a total stranger to drought, and on volcanic soil which is shaken by subterranean shocks, the nutmeg-trees are grown as they grow in their native forests, under the shade of lofty trees: "Behold," says Camoens, whom we



BANDA VOLCANO.

might cite a hundred times in describing these seas, where so much Portuguese grandeur was once displayed, "behold the Banda Islands, variegated with brilliant hues, with red fruits, and with multi-colored birds that live on the tribute of the green nut." The superb Banda Volcano, a symmetrical cone, sends up a continuous column of smoke. The 110,000 inhabitants of the archipelago belong, by their principal ancestry, to the great Papuan nation, but they have absorbed something from the Malays, the Arabs, the Portuguese, and the Dutch. The descendants of the soldiers, seamen, and functionaries installed in Banda in 1621 by the Dutch, for the purpose of cultivating nutmegs in the *perken*, that is to say, in the parks or enclosures which they held by the liberality of the government, are called Perkeniers.

Gunong Api, Wetter, Roma. — South-west of the Bandas, the volcanic chain of this ocean is prolonged by Gunong Api, a volcano lost on the confines of Banda Sea and Flores Sea. It is only 60 or 70 miles from Gunong Api to Wetter and Roma, which lie within the orbit of Timor.

From Ceram to the Aru Islands. — From the eastern capes of Ceram a chain of islets runs off to the south-east in the direction of the Kei and the Aru groups. They are called Kilwara, Ceram Laut, Goram, Manowolko, Matabello, etc.

Kilwara, a very small, sandy, and coralline island, bears a curious little town supported on piles, and entirely covering the land so that at a distance it presents a most singular appearance; it is frequented by Bugis traders and merchants from Ceram.

Ceram Laut, or the Flower of Ceram, is encircled by coral reefs; most of the inhabitants are Mussulmanized Alfures from Ceram.

Manowolko (49 sq. m.) never hears the sound of water rippling over its coral rocks; its 2000 inhabitants are pagan Papuans, with a Malay and Bugis aristocracy into which some Negroid blood has filtered; they speak the same language with the neighboring people of Goram and with those of the east of Ceram.

Mohammedan Goram, girdled with coral reefs, contains 6300 inhabitants; these are Malays crossed with Alfures, and they spend their lives in trafficking at long distances from their island, navigating in mere canoes a sea bristling with reefs.

The Matabello, Kisivoi, and Uta Islands are protected from the deep-sea waves by a belt of coral. They are occupied by idolatrous Papuans.

Through Teor, likewise pagan and Papuan, through Boon, and through Kanilor, we reach the Ké archipelago.

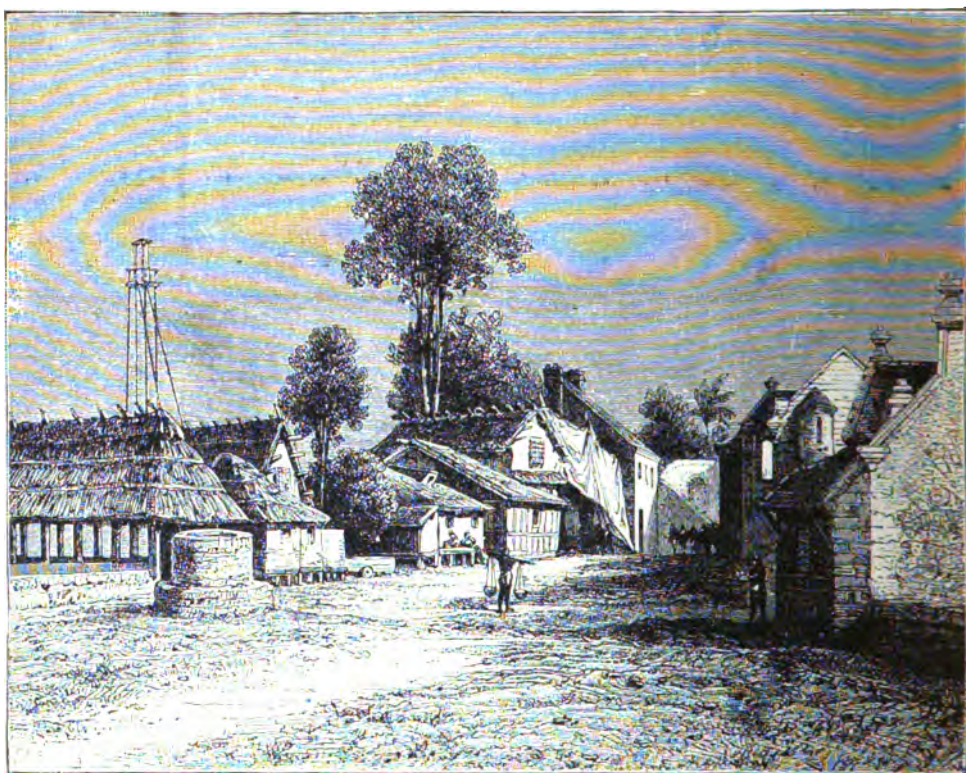
CELEBES.

Celebes. — The Bugis. — Celebes is cut by the equator in its northern peninsula; it is washed by Macassar Strait¹ on its longest seaboard, — the western, — opposite Borneo, which is from 75 to 155 miles distant. Though so near together and in the same latitude, these two islands nevertheless differ widely in scenery, in their birds, and in all their large and small animals. It is even said that Celebes, which lies in a confused maze of lands scattered between Asia and Australia, belongs to a centre of creation totally unlike both these divisions of the world, and that it perhaps once formed a part of "Lemuria," as people have been pleased to name the problematical continent of which the far-away Madagascar is thought to be a remnant.

With an area of 72,600 square miles, or more than 77,000 including adjacent islands, Celebes is larger than Java, which it equals in fertility; in wealth it is much inferior to the latter, as the Dutch have not deigned to exploit it to its fullest extent. It has hardly 1,500,000 inhabitants: as densely peopled as Java, it would support 30 millions. Celebes is composed of four peninsulas joined to a trunk which faces Borneo; as has already been remarked, this oddly shaped island is closely imitated in conformation by Gilolo, which lies to the eastward and which is only one-eleventh as large. Three broad gulfs, Tomini and Tomaiki on the east, and Boni on the south, separate these peninsulas, which are burdened with volcanic mountains — mostly extinct. Bobokaraeng, which is thought to be the highest of the Celebesian peaks, rises at the very extremity of the southern peninsula, called the Land of Macassar. These old volcanoes dominate *savas*, or valleys and rice-fields constituting the garden of this wonderful island, which is everywhere penetrated by the sea,

¹ The correct spelling is Mangkasara.

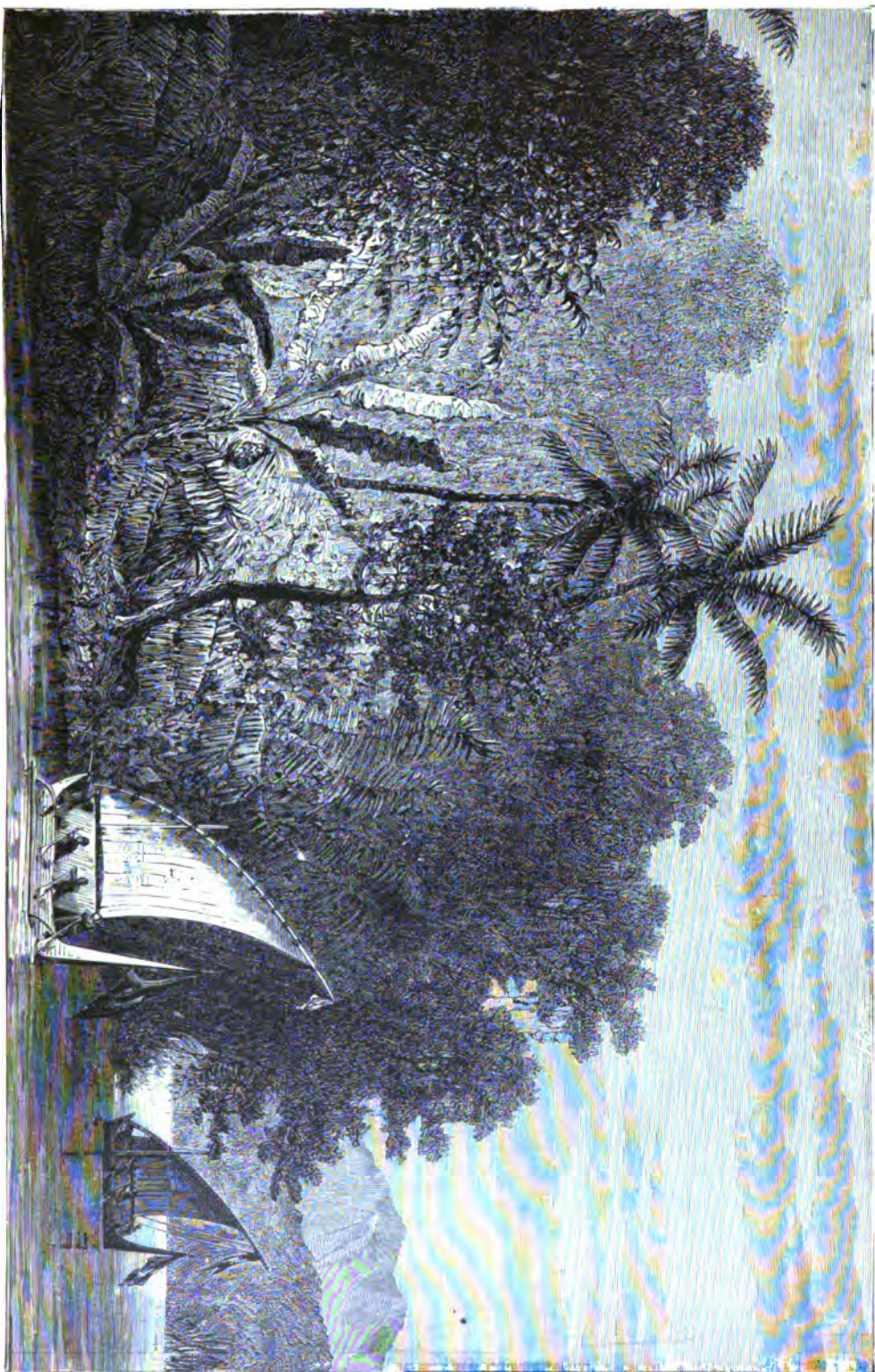
everywhere inundated by rain, and which is nevertheless healthful, for it has neither mire nor deltas nor stagnant waters. Its charming lakes are mountain lakes; its ever wakeful torrents flow down to Macassar Strait, Flores Sea, and to the three great gulfs. Rivers rumble and brooks babble in the shady forests which rise opulent and brilliant out of a deep soil of decomposed basalt; no tiger roams here, no panther stealthily watches, crouched on the ground, ready to spring with a terrible bound upon his victim: Celebes possesses neither the treacherous and beautiful felines, nor the rhinoceros, nor the elephant. The only destructive or unsightly



A STREET IN MACASSAR.

animal is the crocodile. Monkeys throng the woods, enlivening them with their chatter and their gayety.

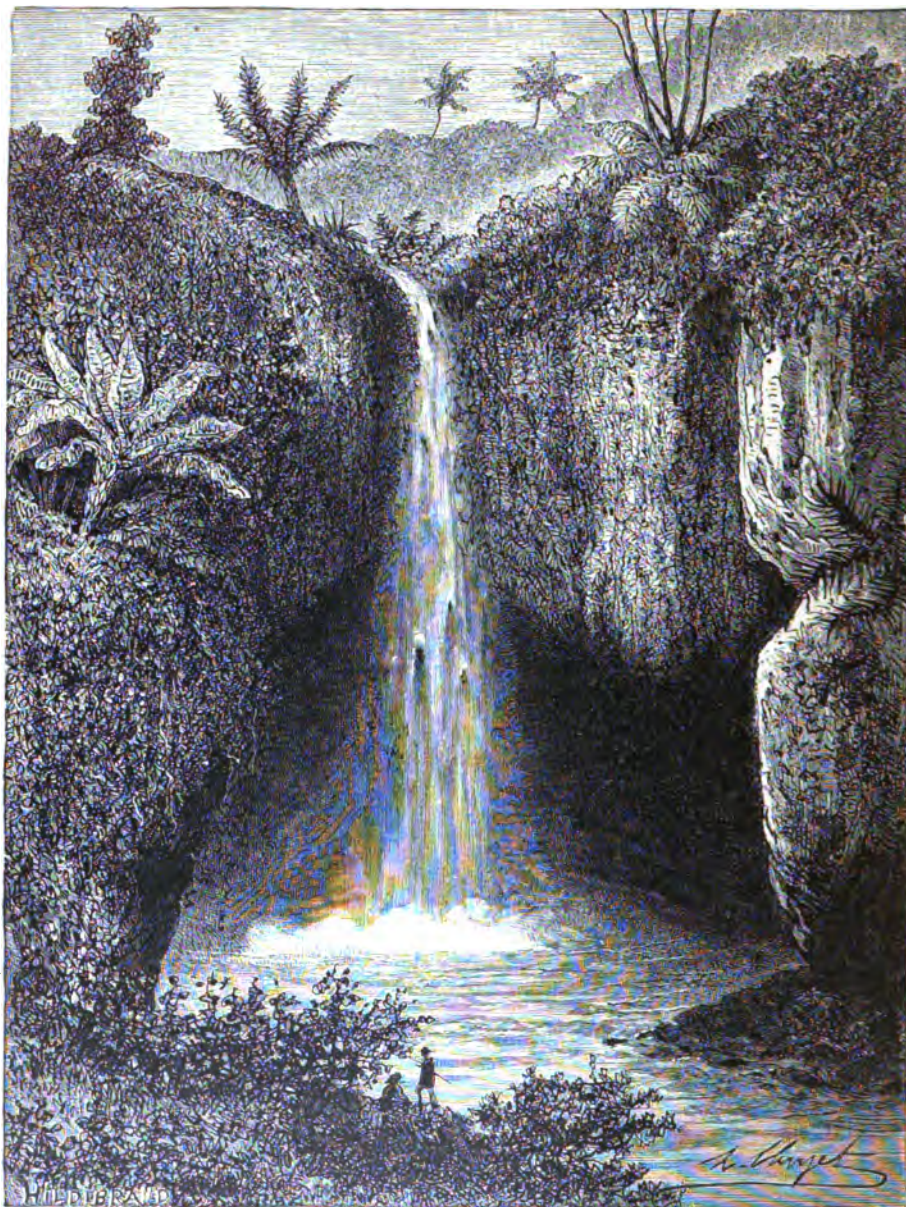
Celebes is so far subject to Holland that its Malay sultans of all degrees of importance recognize more or less strictly the suzerainty of the Low Countries, but the Hollanders in fact occupy only the smaller part of the island; they cultivate coffee and superintend the work on the plantations. In Minahassa, which is a region of remarkable beauty, occupying the point of the northern peninsula, — the longest and most spindling of the four, — the Dutch have half civilized the cross-breed inhabitants, who are Papuans mixed with Malays. About the year 1800, these natives, who were still barbarians and perhaps cannibals, spoke several different languages; at present, they are peacefully engaged in cultivating coffee; they learn the Malay tongue rather than the Dutch, which has made but little progress in Netherlands



ON THE ISLAND OF CELEBES.

India, in spite of the 200 years of Dutch rule. When Holland lets go her hold in the East, the influence of the Dutch will be less apparent there than that of the Portuguese.

The Malay level has passed over the greater part of these islanders, almost all of



WATERFALL NEAR LAKE TONDANO.

whom now make use of the Malay language, and most of whom have become Muslims. But under an outward show of uniformity diversities of race are hidden, and in more than one division of the country the Malay is heir to as many as thirty

dialects spoken by tribes which were in no sense Malayan. The features, stature, all the physical characteristics, show that the Bugis, the Macassars, and other Celebesian nations originally belonged to the same family as the Dyaks of Borneo, the Bataks of Sumatra, and the different branches of the Haraforas or the Alfures, that is to say, to the Papuans and Polynesians, who are much taller and handsomer, and of more generous natures, than the small, ugly, and cunning Malays.

The Malay custom known as running amuck is often witnessed in Celebes. The natives sometimes become ferociously mad, and, seizing a creese or dirk-knife, rush wildly through the streets, cursing and stabbing every one whom they meet. As soon as a person is known to be in this condition, everybody proclaims the news; the cry of "Amuck!" "Amuck!" rouses the people; they gather together and pursue the blood-thirsty madman, and knock him down as though he were a dog. It is said that at Macassar some one runs amuck once or twice every month. This frenzy resembles the *capoeiragen* of the Brazilian Negroes.

Macassar or Mangkasara, named Vlaardingen by the Dutch, lies on an excellent roadstead; it is the principal city in the south, while Menado is the largest city in Minahassa. Menado marks the embouchure of a river which has a fall of 490 feet just below its exit from Lake Tondano.

Sanguir, the Toulours, the Sullas, Bouton, and Salayer.—A chain of islands and islets—the tops of submerged peaks—stretches from the northern promontory of Celebes (Cape Polisang) to the southern cape of Mindanao in the Philippine Islands; their inhabitants resemble in all respects the people of Minahassa. Among these little islands we distinguish Siau, a mere volcano, and Sanguir, which is more extensive and which was ravaged by an eruption of its crater in 1844.

North-east of Sanguir, the Tulour archipelago (or Talaut) rises just midway between Mindanao and Gilolo. The Toulours and Sanguir together are estimated to possess 81,000 inhabitants, on 680 square miles.

The Gulf of Tomini contains the Togian archipelago, embracing 260 square miles; in the Gulf of Tomaiki rise the Peling Islands, which are prolonged to the east in the direction of Gilolo, Ceram, and Bouru by the Sulla group; these last are peopled by Mohammedan Malays. They include Taliabu and Mangola, stretching in an east and west direction for about 100 miles, and divided by a narrow strait near the centre.

In sight of the extremities of the south-eastern claw of Celebes are Bouton, which is mountainous though not very elevated, Muna, lofty Kabaina, the Tokong Besi or Blacksmith Isles, Vovoni, etc., forming an advance-guard archipelago of nearly 4000 square miles, a half of which is comprised in Bouton; the inhabitants are of Malay speech and resemble those on the opposite coast.

Salayer (298 sq. m.), which is very long and narrow, faces the south-eastern cape of the peninsula of Macassar.

BORNEO.

Borneo.—The Dyaks.—Holland and England hold sway in Borneo, the latter in the north, the former in the south; it is true that the suzerainty of both countries is in many places merely nominal. What they rule here, and what is more or less formally protected by them, constitute a small world, for Borneo is the second island on the globe (excluding Greenland), being inferior to New Guinea alone, and it is only 17,328

square miles smaller than the latter: it contains 285,872 square miles, or more than four times the area of New England, but the inhabitants number less than 2 millions.

There is nothing national in the designation "Borneo." It is a slight corruption of Brunei or Bruni, the name given to a portion of the north-west coast described by Magellan in 1521. Borneo lies on both sides of the equator, not far from Java; down to the present time it has remained almost unknown and half uninhabited, while Java has been entirely explored and is over-populated. Borneo has not been well worked anywhere except on the coasts. Back of the littoral margin, especially in the south, stretch vast dripping plains. Villages are rare except along the sea-shore, and in the deltas and on the banks of such rivers as the Barito (which has a length of 560 miles), the Mahakkan, the two Kapuas, and the Rejang. Miry, sluggish currents flow down to these streams; they are generally of a black color after the storms, doubtless on account of the extensive coal-fields which their waters skirt. All these streams abound in crocodiles.

Borneo is gluttled with treasures; it possesses coal deposits, gold-mines which are worked by the Chinese, diamonds, antimony, and various other metals, fancy woods, cabinet-woods, dye-woods, and the different spices of the East Indies. Limitless forests, swarming with orang-outangs, elephants, tigers, rhinoceroses, buffaloes, and small black bears, undulate on the hills of the coastal zone; they climb along the mountains of the interior, adding every year a stratum of leaves to the mould which has been accumulating on the soil for centuries.

The Bornean mountains, so far as known, have never been subjected to the action of those forces which have raised so many volcanoes out of the bosom of the Megalonesian sea: Borneo seems, then, to be a small, non-volcanic continent with a girdle of volcanic islands. The rocky mass of Kini Balou, which rises in the extreme north of the island, and which is supposed to be the culminating peak, is estimated to have an altitude of 13,698 feet; this height, fixed by Admiral Belcher, is probably somewhat over-estimated.

Pagan Malays, classed under the general name of Dyaks, occupy portions of Borneo; they are said to be three times as numerous as the Mussulman Malays of the cities and villages along the coast. The Dyaks, who are lighter-hued and taller than the Malays, with much rounder faces, have the appearance of belonging to a different humanity, but they are tending more and more to mix with these heterodox intruders, who control the sultanates and who have possessed themselves of all the wealth and social advantages; they are also mingling with the Chinese, who are the more recent comers to the island. The Dyaks are strong, courageous, loyal, and frank, and yet they engage in man-hunting, in which they exercise great cunning and cruelty, though doing it as a sort of religious duty. The men of these tribes cut off heads in order to imbibe the virtues and powers of the slain, and the skulls are precious preserved. These trophies possess the power of conciliating the spirit of the dead; the Dyak esteems them above all his fortune, and as highly as his own life; it is his family inheritance. Fortunate is the man who has twenty-four of these grinning horrors; his hut is a palace! Many of the Dyaks feast on human flesh; they say that man's shoulder is bitter, while the brains and the palm of the hand are sweet to the taste. The old customs of cannibalism and head-hunting are losing ground in measure as the Europeans ascend the Bornean rivers.

The Malays, who are skilled traffickers, and who, until late years, have been successful pirates, scorn agriculture and the crafts, which have little by little fallen to

the Chinese. In Borneo, more than in any other island of Megalonesia, the sons of the Middle Kingdom have a clear field before them; they number hardly 100,000, but they already occupy the gold districts, and we have no assurance that Borneo will not become a small China. If these Yellows do not take possession of its soil, it is difficult to see what eastern people besides the Javanese can stir the alluvia.

In the part of the island governed by the Dutch, or which is nominally obedient to them, the Borneans have not been won over to the use of the *Nederduitsch* tongue; neither has English encroached much upon Malay, which is the important idiom of Borneo; this is true both in the sultanate of Sarawak, which was regularly organized into a state in 1842 by Sir James Brooke, and throughout the vast territory of the North Borneo Company.

The Borneo of the Dutch.—Nothing would have been easier than for Holland to lay hands on the entire island, but she had no desire to do this, and established her-



FISHING HOUSES, BORNEO.

self principally on the coasts facing Java on the south, Celebes on the east, and Sumatra on the west; she made no attempt to occupy the north-east shore opposite the Philippines, or the north-west, which looks out on Cochin-China and Anam. Her part is nevertheless very large, as she possesses more than two-thirds of the island. Her share is placed at 200,000 square miles, or three times the area of New England, with 950,000 to 1,200,000 inhabitants, against about 85,900 square miles and 576,000 inhabitants that are either protected by or subject to the English. Holland owns the long rivers and the broad valleys; on the western shore she possesses Pontianak lying on one of the arms of the delta of the Kapuas, and on the southern coast she has the town of Banjermassing, which is built in a marsh, on the bank of a river communicating with the Barito in its lower course.

The Borneo of the English.—The great agricultural, mining, and trading company which is backed here by England has its ports and its agencies in the northern part of Borneo, in the east on Macassar Strait, in the north on the Sulu Sea, and in the west on the China Sea. Its rivers are all insignificant, but on its territory of 27,500 square miles rises the highest mountain, so far as known, in Borneo, namely,

Kini Balou. England's 200,000 Bornean subjects are governed from Sandakan, a small town, to which a vain attempt was made to give the Indian name of Elopura or Beautiful City. For clearing, planting, and digging the soil, for the creation of wealth, the British North Borneo Company counts less on the native Malays and Dyaks than on the Chinese whom it imports into the country. In 1888, two neighboring divisions on the northwest coast of the island, the sultanate of Brunei, and that of Sarawak were placed under British protection. These two principalities are supposed to contain 370,000 inhabitants, on about 55,000 square miles. These men are first of all Dyaks, then Malays, then Chinese. There are a few Europeans who have governed Sarawak since 1842, the year when Sir James Brooke became Rajah of the country; their residence and seat of empire, Kuching (pop. 10,000), lies on the bank of the stream which has given its name to the sultanate; owing to the influence of the tide, the Sarawak is navigable for vessels as far as Kuching.

Off the north-western coast of Borneo is Labuan, which contributes to the British Empire a territory of 31 square miles, 6000 inhabitants, a commercial port, and a coal-mine.

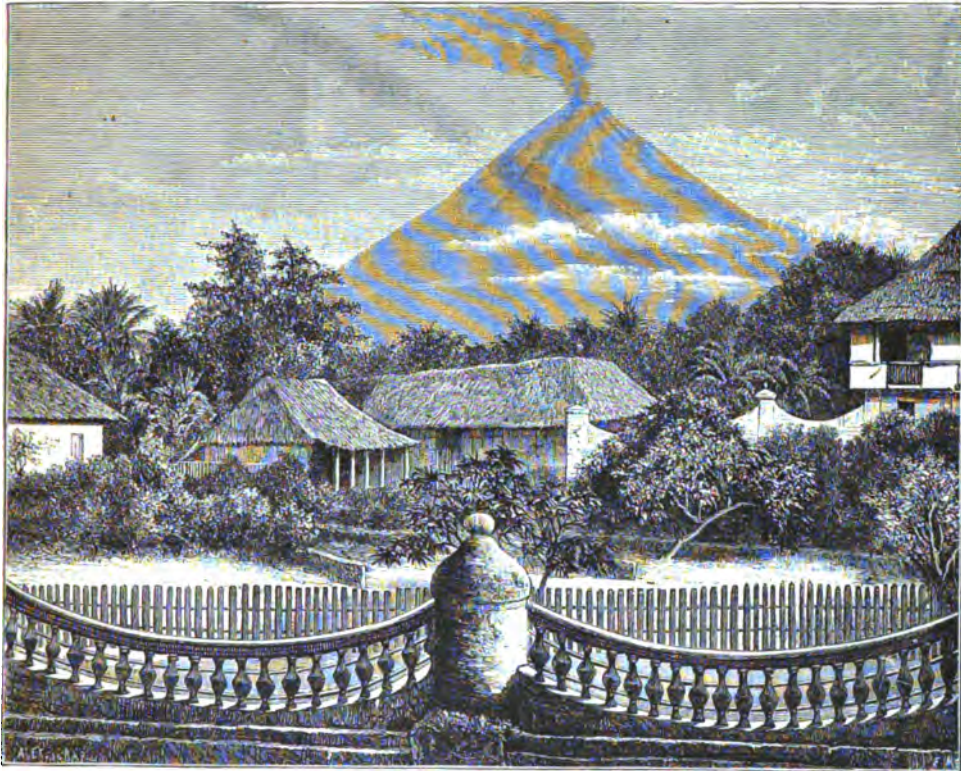
THE PHILIPPINE ISLANDS.

The Sulu or Joló Archipelago. — The Spanish Sulus, lying north-east of the Bornean littoral, form a bridge between Borneo and the Philippines. They are supposed to contain 100,000 inhabitants on about 950 square miles. It is a mountainous archipelago divided into four subordinate groups, namely, the Tawi Tawi, Tapul, Joló, and Pangutarang groups. Before the recent conquest of the islands by the forces of Castile and Leon,¹ their Mussulman Malays skimmed the seas of this Orient with as much daring and courage as the pirates of Algiers, Sale, and Tunis displayed in the Mediterranean. Their pillaging expeditions were especially directed against the Visaya Islands, that part of the Philippines where the language resembled their own most closely, and they carried off an average of 3000 captives yearly. The present capital, situated in the island of Joló, was, and still is, a small Mecca.

The Philippines. — The Philippines lie north of the equator, the northern islands approaching the tropic of Cancer and at the same time the southern shore of China; from the Chinese port of Hongkong to the nearest coast of Luzon, the chief island of the Philippines, it is hardly as far as from Marseilles to Algiers. From 112,000 to 116,000 square miles, controlled in fact or nominally by Spain, and 7 million inhabitants constitute the possessions of this archipelago; it is volcanic like Java, and rivals the latter in opulence of soil and in climate, though not in acquired riches. Its masters have not bled the Philippine soil; the Spaniards of Manila first of all built churches and cloisters and catechized the natives. Few colonies exist in which less blood has been shed, and certainly none where the subject people has less hatred for its owners and law-givers. The Philippine Islanders, living under such favoring circumstances, are not scorned by their masters, and they may be considered as among the most fortunate of earth's inhabitants.

¹ The Sulu Archipelago was annexed by Spain in 1878. It embraces about 150 islands, many of the smaller of which are uninhabited. They once formed, together with a portion of North Borneo, an independent state governed by a hereditary sultan, and possessing a regular nobility of important political influence. — ED.

They spend their days free from care, in the shelter of forests in which every kind of building and ship timber grows in abundance, and which give refuge to no ferocious beasts, — at the foot of palm-trees, on the margin of fields of abaca or Manila hemp, and of tobacco that rivals in quality that of Cuba itself. Of the 52 provinces of the archipelago, which it is proposed to reduce to 18 (Mindanao aside), there is not one which is not capable of being put under a high state of cultivation, owing to the excel-



THE VOLCANO OF ALBAY.

lence of the soil, to the six months' rains, locally known as *collas*, and the six months' sunlight of the season of the *nortadas*.

The Philippines were named in honor of the king who ruled from the Escorial in 1571, when Spain began the settlement of these shores which Magellan (or Magalhães) had discovered 50 years before. This Portuguese navigator, in the service of the Spaniards, had landed in 1521 at Butuan, on the large island of Mindanao, and shortly afterward he died from an arrow-wound in a marsh on the island of Mactan: and there his remains repose to-day in a grove of tall mangrove-trees.

Luzon or Luçon, its Volcanoes. — Inhabitants, Languages, and Dependencies. — Luzon was brought under the yoke of Spain as much through the patient toil of her missionaries as through the exploits of her soldiers. It is a large volcanic island, long, and of quite uniform breadth. Manila Bay indents it on the south, just in the region where the extensive Lake Bay robs the land surface of a considerable area; south of

this lake, Luzon swells out and then narrows down to a slender tongue of land, the Isthmus of Tayabas, which attaches the island on the south-east to the splendid Camarines peninsula, or the peninsula of the Vicols, which is deeply indented and very oddly shaped. Among the volcanoes of Luzon, the most famous is south of Manila; it is named Taal, and it has three craters; it rises out of Lake Bombon or Bongbong, from which flows a short river choked with sand: with a height of only 768 feet, it is remarkable as one of the lowest volcanoes in the world; it has nevertheless made itself terribly dreaded, especially in 1754, when in full mid-day it enveloped the capital, 47 miles distant, in the gloom of the darkest night. Its wrath has been appeased, and in one of its craters slumbers a lake. East of Taal is the superb peak of Majajai (7326 feet), which has been quiescent since 1730. In the land of the Vicols, Isarog (6450 feet) has not been in activity within historic times; Iriga (3976 feet) overlooks the charming lake of Buhi, which was formed, it is said, on the 4th of January, 1641, by an eruption which sunk one of the sides of the crater; Mayon (7789 feet) or the Volcano of Albay, a magnificently symmetrical mountain, is often roused to fury; it is said that Bulusan strikingly resembles Vesuvius, having two peaks, — one a bell-shaped dome, the eruption cone, the other a high ridge similar to Monte Somma.

In the centre of Luzon, where the soil is so productive that *pueblos* of 10,000 to 20,000 inhabitants abound, the bulk of the population consists of Tagala, while the Vicols predominate in the larger part of the Camarines peninsula, and all sorts of small peoples occupy the north and centre of the trunk of the island. These last include the invading Ilócanes, the warlike Pampangos, the highland Igorrotes, — valiant, hardened pagans who are said to have Chinese blood in their veins, — Pangasinanes, cannibal Ifugaos who have not been converted to the Roman Catholic faith, and Ibanaga, who are Christians to-day, but who struggled bravely for their independence; and in the loneliest and most elevated and remote districts live the Negritos, Aëtas, or Itas, as they are variously called; they are autochthonous savages, and, as their Spanish name implies, they are Negroes of small stature; they have big lips, woolly hair, and flat noses. They were not without influence in the formation of the Tagal race, for it must be admitted that the preponderant people of Luzon is derived from a fusion of the natives with the Mussulmans who invaded the archipelago about ten centuries ago. The Negritos are not confined to Luzon, but are to be found in Mindanao, in Negros, which is named from them, and in other islands: in all they number from 20,000 to 25,000.

The Tagals or Tagalocs have been fashioned by the Spanish missionaries into a good-natured, amiable, inoffensive race; they are distinguished for their nimbleness rather than for physical strength, though their supple, well formed bodies are not wholly lacking in vigor. Like many eastern peoples, they bear pain unflinchingly, almost indifferently, and they face death without shrinking. They will fight heroically for their masters, but they do their toil in a listless fashion: they are addicted to chewing the betel-nut. Their amusements consist of theatrical performances, cock-fights, musical entertainments, and dancing exhibitions. As Manila, one of the great emporiums of the East, lies on their territory, they have been subjected to a greater number of intermixtures than most of the other islanders, and they seem to be farther removed than the others from the true Malay type, as, for example, than the Visayas. Their Tagalog language is gaining on the various idioms of the north and on the Vicol tongue in the east; since the arrival of the Spaniards, it has denationalized the

west of the Camarines peninsula and the islands of Mindoro, Marinduque, and Polillo. It is spoken by 1,200,000 men. It abounds in particles, and in affixes which are capable of modifying the sense of the verbs so as to express the most delicate shades of meaning; compared with Malay, in which these "altering" particles are far fewer, it is a difficult idiom. Tagaloc once had its own alphabet, but it was long ago abandoned for the Roman characters: with the exception of a few more or less obscene songs, a few funeral chants, and scraps of legends, its literature is worthless, consisting mainly of platitudes imitated from the Spanish.

The 350,000 Vicols occupy the greater part of the Camarines peninsula, and various coastal islands. They are a peaceable, submissive nation, by no means on a level with the vigorous, proud-spirited, and courageous Tagals; nearly all of them long ago adopted the religion preached to them by the missionaries, and Spain has few more obedient subjects. They are Malay in race, and they speak a Malay dialect which very closely resembles Tagaloc.

The exact number of the Chinese population of Luzon is unknown; there are more than 20,000 in Manila, and the entire group of the Philippines contains perhaps 50,000. The native has little love for them, because they are more successful gardeners, agriculturists, and fishermen than he is himself; they are odious to the white man because they find wealth where the less patient and less plodding European finds poverty, or, at the most, a bare subsistence. The Spaniards have vainly sought for a long time to keep them out of the archipelago by means of exorbitant special taxes and custom-duties, and excessive license-rates. The Sanglays, as the Chinese are called here, have been massacred, hanged, and clubbed to death by thousands, at four or five different periods; those who escaped the knife, the rope, or the bludgeon fled to the sea, where they were drowned, or to the woods, where they died of starvation; at other times they have been banished *en bloc*. But the exiled always return, the dead are always replaced, and, after each fresh attempt to rid the land of these aliens, the "Indians" and Whites see ease once more entering the hut of the Chinese gardener, fishermen, or laborer, and fortune seated in the office of the Chinese merchant or in the counting-house of the Chinese banker. And gradually, from the alliance of the abhorred foreigners with the Tagal women, a powerful cross-breed race is growing up, called the Mestizos Chinos, or Mestizos de Sanglay,¹ already numbering more than 200,000 persons.

The Whites, who are still very few in number, are nearly all Castilians, and there are perhaps not more than a half as many Creoles as there are Chinese in the entire archipelago. The Spanish language is slowly taking possession of the schools and of commerce, but it is not in general use yet anywhere except in the vicinity of the capital, in the provinces of Manila and Cavite. But the future undoubtedly belongs to it.

All these constituents — Christians or pagans, Tagals, Vicols, Chinese and Sanglays, Whites and Creoles, the subjugated and the untamed — form a nation of 3½ million men, including the neighboring islands.

The chief of these dependent islands are: in the extreme north, the volcanic Babuyanes; — on the east, Polillo (290 sq. m.), where Tagaloc is spoken; — east of the Camarines peninsula, Catanduanes (625 sq. m.), where Vicol is in use; — in the

¹ Strictly speaking, the Mestizos de Sanglay are hybrids derived from the lawful marriage of the Chinese with native women. The cross-breeds resulting from illegitimate unions are much more numerous than the Sanglays properly so called.

south, Mindoro (3800 sq. m.), which is gradually becoming Tagalized; Marinduque (288 sq. m.), which is also being subjected to the Tagal speech; Burias and Ticao, in which Vicol is spoken; — Masbate (1275 sq. m.), where Vicol is in use in the north and Visaya in the south.

The Visaya Islands. — The Visayas, who are Malays like the Tagals and the Vicol, and who are much more numerous than these two peoples combined, number fully 2½ million; their language is closely related to that of the Tagals and the Vicol. They dwell in superb islands embracing an area of 23,000 to 27,000 square miles, not including their settlements on the eastern and northern coast of Mindanao, where they form an important element. They are Christianized and civilized on the coasts and “Infidels” in the uplands; they are either pure-blooded Malays or Malays crossed with divers races, notably with the Negritos. Their possessions include: the south of Masbate; — Samar, an island of 4834 square miles and 185,000 inhabitants, separated by a narrow strait from Leyte, which covers 2717 square miles and contains a population of 270,000; — Bohol (1143 sq. m. and, with Siquijor, 244,000 inhabitants), not volcanic; — Cebu, where it is said the best Visaya is spoken; this very long, narrow, and marvellously graceful island is similar to Bohol: it never had any craters, and it contains neither basalts nor lavas; nearly 505,000 inhabitants are supported on its 2125 square miles; — Negros (3344 sq. m.), with a mountain 8200 feet high called Malespina, the only active volcano on the archipelago; among its 242,000 inhabitants, it is doubtful whether there are 10,000 of those Negritos from which the name of the island is derived; — Panay, which is very densely peopled since it contains 734,000 souls on 4568 square miles; — Tablas (270 sq. m.), Romblon, and Sibuyan, which together have 35,000 inhabitants on 517 square miles; — Paragua (or Palawan), from 10 to 30 miles wide but with a length of nearly 280 and an area of 5430 square miles; it supports a mountain 6844 feet high: it was long neglected by Spain, and is only imperfectly known and imperfectly subjugated at present; it is one of the most favored islands of this favored archipelago; — finally, north of Paragua, on the way to Mindoro, are the Calamianes.

Mindanao. — This is a superb island, one of the largest of Megalonesia, embracing an area of about 38,500 square miles; the Spaniards have not yet been able, or they have not cared, to bring it under complete subjection to their law and faith; Spain, in fact, possesses nothing but a few strips of coast-land here; the rest of the country belongs to mountain tribes, for the most part pagans, and to *Moros*, as the Castilians term the Mussulmans; the latter are Malays, and only recently they were pirates, but their brigandage was broken up when Spain annexed the Sulu Islands (1878). Christian and “Latin” Mindanao is limited to a few forts and pueblos of the province of Surigao, on the north and east, and to the province of Zamboanga, at the terminus of the large western peninsula, which bears the same relation to Mindanao that the large eastern peninsula of the Vicol does to Luzon.

These few Spaniards with the Tagals who followed them, the Visayas of the northern and eastern littorals, the Malays of the various sultanates, the tribes of the interior, the autochthonous Negritos driven back into the densest woods and into the most inaccessible mountains, — all this population is estimated at 209,000. The Philippine Islanders sometimes witness eruptions from their mountain-tops, for volcanic Mindanao forms the pedestal of at least three volcanoes that have not yet been chilled by age. Apo (10,312 feet), which is thought to be the loftiest peak in the island, overlooks Davao Bay, a magnificent indentation of the southern coast.

Among the dependencies of Mindanao, Dinagat (413 sq. m.) and Siargao, both of them Visayan, rise east of the northern point of the island, and Basilan (or Isabella) fronts the southern point, on the path from Zamboanga to the Sulu Islands. Basilan (495 sq. m.) is mountainous like all the Philippines. It belongs to Malay pirates, whose practices are continually interfered with by the Spaniards.

Manila (pop. 270,000) is the capital city of Luzon as well as of the entire archipelago. It borders the ample Bay of Manila (which has a coast-line of about 95 miles), at the embouchure of the Pasig, a river draining Lake Bay. On one bank rises the walled town of Manila; on the other are several commercial suburbs, of which the most thoroughly Chinese, or, in other words, the most active, is Binondo. Like Havana, Manila has a world-wide fame for the cigars which it manufactures. The earthquakes of 1796, 1824, 1835, 1863, and 1882 caused great destruction to the city. It is the oldest European town in the East except Goa.

MICRONESIA.¹

Micronesia, Melanesia, Polynesia.—East and south-east of Megalonesia, small islands and islets dot the bosom of the Pacific, from Asia and Australia to the double continent of America. The name Micronesia, or Small Islands, has been given to this part of the globe in distinction from Megalonesia, or Great Islands. It comprises: Micronesia in the restricted application of the term, that is, the little islands east of the Philippines; Melanesia, or the islands of the Blacks, lying east of New Guinea, which is still Negro, and of Australia, which has ceased to be such; and Polynesia, or the Numerous Islands, east of Micronesia and Melanesia.

The small and weak Micronesian peoples cannot hope for long life. Among some of them the English have quartered themselves and are imposing upon them their faith and their language; the others belong either to Spain or France; these will necessarily become Castilian or French in speech, and will be compelled to bid a final adieu to the primitive past; lastly, Germany is also taking possession of certain archipelagoes in Micronesia, notwithstanding the loud protestations of England.

LITTLE MICRONESIA.

The Small Islands and Their Charming Islanders.—The Micronesian archipelagoes are clusters of coral reefs encircling lagoons. They occupy less than a three-thousandth part of their sea, which has an area one and two-thirds times that of the United States. It is between the Polynesian Islands, Melanesia, the Philippines, and Japan that they emerge from the mighty Pacific Ocean. On these small tracts of land, all nature is on a small scale. The vegetation corresponds with the size of the islands themselves, and no large, powerful, magnificent animal is to be seen here.

The 94,000 (?) inhabitants of the 600 islands of Micronesia, which together embrace 1360 square miles, are the most mildly disposed of all the islanders of the globe. They are as far removed from the unchastity of the Tahitians as from the

¹ For present status of the Micronesian Islands see pages 899-901.

cannibalism of the New Zealanders and Fiji Islanders; the missionaries who have labored among them have always been struck by their remarkable excellence of disposition. They are delicate and well formed rather than tall and robust. They bear a strong likeness to the Polynesians with whom they have mixed in the archipelagoes of the south-east. They have long though not thick beards, and beautiful black hair; it is not rare to see a very noble cast of features among them. They tattoo themselves. The sea has no terror for them, for in their little islands they live face to face with the ocean, and familiarize themselves from their earliest years with its outbursts of wrath: they manage their pirogues with extraordinary boldness, skill, precision, and safety.

Their idioms, which show the influence of the Polynesian tongue in the eastern archipelagoes, are less soft and harmonious than the dialects of this latter language, and are not lacking, like them, in sibilants. Very many of the Micronesians have been converted to Christianity through the teachings of the missionaries, some of whom are Roman Catholics, while the rest belong to various Protestant sects.

Mariana Archipelago. — The Spaniards, who have ruled over this group of islands since 1668, have attached it officially to the Philippines, as a 53d province. The Marianas are also known as the Ladrões. The name *Islas de los Ladrões*, or "Islands of the Thieves," was given them by the ship's crew of Magellan, on account of the thieving propensities of the inhabitants. Magellan himself called them *Islas de los Velas Latinas*, or "Islands of the Lateen Sails"; they lie in a northerly and southerly direction, nearly midway between New Guinea and Japan, between the 10th and 20th parallels of north latitude. All together they comprise only about 440 square miles, with less than 11,000 inhabitants, nearly all of whom are grouped on the largest island, Guajan; like all the other members of the archipelago, Guajan is volcanic and mountainous. It is said that in 1521, when Magellan landed on the islands, they supported 100,000 islanders, though according to other estimates they numbered only 50,000 or even less. The present population is derived from the Spaniards, who have immigrated one by one from the Philippines and Mexico, and from Tagals who have arrived from Luzon.

The governor, who is dependent upon the Captain-General in Manila, resides at Agaña, in Guajan.

The Carolines and the Pelews.¹ — The Carolines, which have been officially dependent on Spain since 1733, are so widely scattered that fully 1780 miles separate the first on the west from the last on the east; they lie between the 5th and 10th parallels north latitude. The entire archipelago, numbering 500 islands or islets, embraces only 560 square miles, with 25,000 inhabitants; the climate is charming and always equable, for the beneficent ocean furnishes at all seasons a superabundant supply of warm rain to all these little archipelagoes.

The Carolines include only 38 islands of any considerable size; they exhibit two different kinds of nature. Some are mountainous, abounding in streams, with luxuriant vegetation, and adorned with wonderful ferns; the others are low, flat, and dry, consisting of arid coral, and covered with trees the foliage of which is blighted by the salt sea-breezes. There are only three that rise above a very mediocre altitude, namely: graceful and enchanting Ualan or Kusai; Rouk or Trouk or Hogolu, which alone contains a half of the Carolinos (others say a third); and Ponapé, which, though the largest of the 500 islands, is only 12 miles across: it bears a mountain 2979 feet high. It is in Ponapé or Ascension Island (pop. 5000) that the Protestantism brought

¹ See pages 900-901.

into the Carolines by the Wesleyan missionaries has had the least effect upon the primitive characteristics of the people. Through the labors of these missionaries, the English language has been quite widely diffused in Ponapé and the other islands of the group. They have been aided in this work by ministers of an entirely different order—the whalers, who are experts in all sorts of vice.

One of the low Carolines, Yap or Guap, which contains only 2000 inhabitants, was far more populous before the Whites entered the island. The same was true of Ponapé, where dwelt, it is said, more than 15,000 persons only thirty years ago; Kusai also, which has cyclopean ruins,¹ with basaltic walls 16 to 20 feet in thickness,



PAPUAN PIROGUES.

bears witness that a more energetic, more skilful, and more numerous people once occupied the Carolines—those Sporades where Polynesians, Malays, Yellows, and doubtless Papuans, have encountered one another.—Out of these elements has sprung a graceful race in which beauty is not rare, either among the men or the women.

¹ The ruins of Ponapé are still more remarkable than those of Kusai Island. At Metalanien harbor, on the bank of a creek, rises a massive wall constructed of basaltic prisms, about 300 feet in length and 35 feet high. There is a gate-way opening on to the creek, through which the visitor passes over a sill made of enormous basaltic columns laid flat, and enters a large court, on the inside of the outer walls of which is a terrace, also built of basaltic prisms. The court is divided into three parts by low walls, and in the centre of each division is a closed chamber, likewise built of basaltic columns and roofed with the same. There are no basaltic columns near the ruins, but very fine ones are to be found about 10 miles distant over an impassable stretch of country. They must, therefore, have been carried down to the coast and then conveyed here by water. The origin of these ruins is of as great interest as that of the huge images found on Easter Island. For a description of them, see C. F. Wood's *Yachting Cruise in the South Seas*.—ED.

The Pelews rise west of the Carolines on the way to Mindanao. They contain 11,000 inhabitants, a small, apathetic, and discouraged people, constituting the sole remnant of 40,000 or 50,000 happy, gay, ingenious, and industrious islanders. Their disheartenment and death date from their earliest contact with the Europeans, and yet Europe has neither extorted from them, nor trodden them under foot, nor contaminated them.

The Marshall Islands. — East of the Carolines, north and south of the 10th parallel, is the Marshall group; it is composed of low, coralline islands, which are divided into the Ralick chain (on the west) and the Radack (on the east). They number from twenty-eight to thirty, not including the most diminutive; they form a remarkably scattered "empire" of perhaps 154 square miles, with less than 12,000 inhabitants, among whom the English planters of Queensland and of the Fiji Islands recruit the ranks of their so-called free laborers. This going and coming of workingmen — a small proportion of them return to the country after the expiration of their contracts — and the preaching of the Protestant missionaries have been the means of teaching the English language to a large number of the islanders; and above all, through these influences the natives have been induced to discard many of their old ideas, abandon the old ways of living, and change their costumes and ornaments for those of civilized societies. This transforming process has in a measure been destructive to man himself, for humanity always comes out of the great work of civilization mutilated.

Jaluit is one of the principal atolls of the Marshall group; it is so large that from the centre the curtain of palms stretching around its girdle of 56 islets is only dimly visible. About a thousand men, or perhaps not more than 500, have their huts on these 56 coralline levees.

The Gilbert or Kingsmill Islands. — The equator cuts this cluster of 18 low islands or atolls, stretching along 525 miles but embracing not more than 165 square miles; the largest island covers 15 square miles. As they are of coralline formation, they lack soil and water and are consequently unfruitful; the little grain that springs up is devoured by the rats, which abound in all the islands. The climate is mild and healthful, and the inhabitants number fully 35,000. Hardly anything grows spontaneously except cocoa-palms and the pandanus. The people subsist mainly on what they procure from the sea. The present population is derived from the alliance of Caroline natives with the Polynesians from the Samoa Islands. Taputeouea contains 7500 inhabitants on its 10 square miles, or 750 to the square mile. These are all fishermen and all skilful canoe-builders. Their little dwellings are gathered in large villages behind canoe-sheds, in the shadow of the trees which produce the cocoa-oil which they sell and the karaka on which they become intoxicated. "*Hôtels de ville*" dominate the massed houses; one of these marvellously well constructed council-chambers and common residences on the island of Buritari, is over 260 feet long and 100 broad; yet these children of nature use neither iron nor nails, and it is with the fibre of the cocoa-palm that they fasten their large structures together.

English missionaries are actively engaged in preaching the Gospel to the inhabitants of the Gilbert Islands. Labor contractors come here for recruits, from the Fiji Islands, from Samoa, from Queensland, and also, but rarely, from Tahiti and New Caledonia. In giving themselves up to this species of slavery, the islanders escape civil wars, massacres, and tyranny.

The Ellice Islands. — The eight Ellice Islands, which are purely coralline like all Micronesia, together cover 170 square miles; they are scattered over the sea, a few degrees north of the Fiji Islands, between the 10th and 13th parallels of south latitude. There are only 2500 inhabitants, 1000 of whom are in Nanomea.

MELANESIA.

The largest division of Melanesia, the most extensive land of the Papuans, is New Guinea, the situation of which joins it to Australia; but its size ranks it in Megalonesia. Outside of New Guinea and Bismarck Archipelago, the Melanesian groups are: the Solomon Islands, the Santa Cruz Islands, New Hebrides, New Caledonia, and the Fiji Islands.

The Solomon Islands. — The Solomon Islands prolong the Island of Tombara in a south-easterly direction, and are, like it, the lofty projections above the waves of a great submarine cordillera. They are comprised nearly between the 5th and 12th parallels of south latitude; they are all mountainous, and generally volcanic with a girdle of coral reefs; from north-west to south-east, they are: —

Bougainville, which bears the name of the great navigator who did the most toward the exploration of this portion of the seas; — Choiseul, thus called from a contemporary of Bougainville, an active, zealous, patriotic minister who aspired to colonize for France, but was unable to do it owing to the decrepit condition of his country, and also because in those days of philosophy and cosmopolitanism the laws of climate were unknown; — Ysabel, the deep forests of which are dominated by Mount Marescot (3901 feet); — Malayta, which supports a mountain of 4265 feet; — Guadalcanal, which is loftier than its sisters, having a peak of 8530 feet, and a volcano which smokes continuously; — San Christoval or Bauro, with summits equalling those of Malayta, etc., — in all 12,163 square miles, with perhaps 176,000 Papuan inhabitants. These robust, agile men are noted for their remarkable keenness of vision; they have the scent of a dog and are admirable canoeists; they delight in tattooing themselves, and are excessively fond of ornament, loading themselves with bracelets, nose and ear ornaments, necklaces, etc.

The Santa Cruz Islands. — These are all small islands even to Santa Cruz (properly Nitendi), which gives its name to the group, and Vanikoro, which the shipwreck of La Pérouse has made famous. It is estimated that 5000 Blacks occupy the 723 square miles of the Santa Cruz archipelago. It lies between the 10th and 12th parallels S., and continues the direction of the great archipelago of New Hebrides toward the north.

The New Hebrides.¹ — Both France and Australia covet the possession of these very fertile islands. The country, though mountainous, is at the same time swampy; the climate is hot but tempered by the sea breezes. The inhabitants are Papuans with woolly hair and heavy beards; they are said to be of mild disposition, except in their wars, which often end with cannibal banquets. The New Hebrides form the chief recruiting-ground of the labor traffic. The British of Queensland and of the Fiji Islands, and the French of New Caledonia employ these savages on their planta-

¹ See page 901.

tions; some go also to the Samoan group and the Sandwich Islands. The fact that there are no interpreters in the various languages of the archipelago proves conclusively that the natives who are taken away under various pretexts cannot be made to understand for what or where they are going.

By adding to the New Hebrides Banks's Islands, their natural annex, it is estimated that there are 85,000 Blacks here on 5116 square miles. The 15th parallel S. passes over Espiritu Santo (1875 sq. m.). This island, the largest and most populous of the group, is properly called *Méréna*; it supports 30,000 inhabitants. It has a length of 80 miles, with a breadth of 40. It contains beautiful mountains, two charming rivers (the Jordan and the San Salvador), and extensive woods. No bird-song



A VIEW IN THE NEW HEBRIDES.

enlivens the forests, for the feathered tribes are rare here; rare also are the animals of any considerable size.

Mallicolo, the second largest island of the group, covers 876 square miles and contains 12,000 inhabitants. It is girt with coral reefs. A woman here exchanges for from six to ten pigs, according to her beauty, or rather her ugliness.

Ambrym, on which smokes a volcano 3501 feet in height, is very rich in cocoanut-trees, but it is almost destitute of fresh water. Its small neighbor, Lopevi, is burdened with a volcano 4987 feet in height, supposed to be the loftiest mountain of the New Hebrides.

The coralline though very fruitful Sandwich, the *Efat* or the *Vaté* of the New Hebrideans, has only a few thousand inhabitants, who are accustomed (or were once accustomed) to devour their enemies scrupulously after a battle.

Erromango, consisting of coral, with a very thin layer of soil, nevertheless has a luxuriant growth of trees, and a great deal of sandal-wood has been taken from it. It is the third island in size, but supports only 2000 inhabitants on 402 square miles.

Tanna contains a still active volcano, called Yasowa. The islanders, who, though undersized, are possessed of some beauty of features, seem to have drawn to a certain degree upon the Polynesian stock. A woman here is worth only one large, well fattened pig. The Tannaites never slay a man of their own tribe for the table, but woe to the shipwrecked alien whom fate casts upon these basaltic coasts. He is pursued with bludgeon, lance, stone hatchet, javelin, sling, poisoned arrow, and even the carbine; then the savages breakfast on his flesh. They do not hesitate to eat a man of the tribe, or even a near friend, provided he dies a natural death. Sometimes it is a body taken from a grave, and just on the point of putrefaction, which makes the dainty feast of the Tannaites (numbering, it is said, 10,000). The flesh of the white man, though leathery and salt, is preferred by them to pork even in its best condition; but the flesh of the Black is said to be far superior to that of the White.

Aneiteum is edged with coral; its mountains rise from 3300 to 3900 feet; the Scotch have converted the small number of inhabitants—who are tall, handsome Melanesians—into a Christian community. This island, the most southern of the New Hebrides, lies south of the 20th parallel, opposite the Loyalty Islands, which form a part of New Caledonia.

These constitute the principal islands of the New Hebrides group; the natives are diminishing because of constant internecine warfare, the prevalence of all sorts of diseases, and because of the small number of births (the women are far fewer in number than the men), and, above all, because of the activity of emigration. A year has often witnessed the departure of 6000 islanders, and not more than a half or two-thirds of these ever return. Those who remain are becoming Anglicized or Gallicized in language, and are gradually adopting more civilized customs. The French have acquired extensive territory in the New Hebrides; in some cases, these possessions consist of entire islands (which are naturally small), in others of large estates on the major islands, such as Espiritu Santo, Mallicolo, and Sandwich. Savagery and cannibalism will soon disappear, and at the same time the twenty or thirty languages which are spoken to-day in the archipelago will be effaced.

NEW CALEDONIA.

Healthfulness of New Caledonia.—**Convicts and Kanakas.**—New Caledonia will not long remain Melanesian. The Whites must in a few years outnumber the Blacks. When the French took possession of the island in 1853, it was estimated—though too liberally, as is always the case in an unknown country—that it contained 50,000 to 60,000 Blacks; at present they number only 25,000.

What more inappropriate name could have been bestowed upon this land? What likeness has it to misty and, in places, almost dusky Scotland? Certainly the skies are not the same, nor the mountains, nor the forest, nor man, for New Caledonia lies within the tropics, between 20° 10' and 22° 28' south latitude, 800 miles east of the Australian littoral of Queensland. It contains very few plains and it offers few

broad valleys to the white settler, who has nothing to fear from the charming and equable climate; despite the swamps, New Caledonia is marvellously healthful owing to the sea-breezes, the favorable slope of the land, the porousness of much of the soil, and possibly to the abundant growths of the aromatic timber-tree called *Niaouli*. The surface is almost wholly mountainous, and serpentine is the prevailing rock. The mountains are here naked, there wooded, and almost everywhere glutted with metals, which include iron, copper, nickel, cobalt, antimony, and gold. Iron predominates among the extinct volcanoes of the south, where nature is dry and the herbage harsh. Gold abounds in the north, especially in the district watered by the *Diahot*, the principal stream of the island, which rises near mountains supposed to contain the culminating summits (5578 feet). Very pretty torrents, shorter than the *Diahot*, but abundant, since the very lowest annual rainfall is fully 3 feet, drop in cascades into the littoral zone; several of them are discharged into magnificent bays, — small, smooth seas protected from the mighty waves and fierce tempests of the open deep by their girdle of corals.

There are many richly timbered districts that are destitute of powerful animals. Before the arrival of the Europeans no large beasts roamed through the extensive forests in which grow mast-like pines (*Araucaria Cookii*), palm-trees, and cocoanut-trees, banana-trees, bamboos, India rubber-trees, bread-trees, and the imperishable houp, from which the natives construct their boats. There were only small animals on the island, and almost songless birds. The white man has introduced the horse, the ox, the stag, the sheep, the goat, and the pig into these silent, deserted valleys. This rich, though not opulent nature was worthy to become the inheritance of the best peasant families of the country whose power has been established here since 1853; but France saw fit to send hither her political exiles (shortly afterward recalled by her), her convicts, — thieves, incendiaries, parricides, matricides, fratricides, and assassins of all sorts. Out of the 16,000 White Caledonians, 10,000 belong to the criminal class: some are still in chains, others have served out their sentences, but are not allowed to return to France; many have received grants of land from the agricultural penitentiaries. Unfortunately, New Caledonia is so small that the people who are reputed to be honest cannot easily absorb the manifestly dissolute throng that already peoples in part its city and its most fertile country districts. What was possible in Australia is not so in an island only one four-hundred-fortieth as large.

Against the 16,000 Whites, there are 25,300 chocolate-colored Papuans. The men are ugly, while the women, with their frizzly hair, big noses, flabby breasts, and with a pipe always in their mouths, are absolutely frightful. Before the Roman Catholic missionaries began their labors here, these people were cannibals, but they now feast on yams and taro. They are gradually learning the French language. The 16,000 Whites and 25,300 Blacks make together 41,300 inhabitants dwelling under the clement New Caledonian sky, from which descends neither cold nor heat, the temperature ranging on the shore from 48° to 90° F. To these 41,300 must be added the New Hebrideans, the Chinese, the Negroes from Africa, and the Indians from the Malabar Coast, who are brought here by the "labor dealers" and most of whom remain in the island after the expiration of their contracts. In all, the population may be rated at 44,000, or at 62,700 inclusive of the Isle of Pines and the Loyalty Islands. New Caledonia embraces 6680 square miles; it has a length of 233 miles, a breadth of 30 to 37, and a coast-line of 620; the eastern slope is much narrower and much more rugged than the western.

Nouméa (pop. 5000), the capital, on the south-western coast, has a fine harbor on a charming bay. It lies near Mont d'Or (2543 feet), which is said to have been thus named by an officer who was a native of Auvergne; the name ought, therefore, to be spelled Mont Dore.

New Caledonia has two dependencies: the Isle of Pines, 30 miles to the south-east; and the Loyalties, lying 60 miles to the eastward, across a very deep sea.

The Isle of Pines. — This island, which is of coral itself and surrounded by coral reefs, has a chain of littoral hills, the loftiest of which rises 1483 feet above the seas.



A VALLEY NEAR NOUMÉA.

The centre forms a plateau about 250 feet above sea-level, on which ferns abound; the hills and valleys of the coast are clothed with tall, pillar-like pines which have won for the island its name of Isle of Pines; the native name is Kunié. Like New Caledonia, this island served at first as a penitentiary for political offenders. It is now used by the French as the residence of prisoners not condemned to labor, who are sent over from New Caledonia. No more favored retreat could be found for these men, for the sea-breezes make the climate mild and beneficent. The Papuans, who numbered a thousand when France took possession here, are now reduced to 500 or 600.

The Loyalty Islands. — This small chain of islands runs parallel to New Caledonia, from north-west to south-east; it comprises three good-sized islands and a large num-

ber of islets, embracing in all 830 square miles, with 16,500 inhabitants. It is a coral-line archipelago which has been uplifted by volcanic action to two or three hundred feet above the sea. The largest and at the same time the central island is Lifu, which covers 440 square miles and reaches a height of nearly 300 feet; it has a population of 8000. To the south-east of Lifu lies Maré or Nengoné (250 square miles), with an elevation of a little over 300 feet; north-west of Lifu is Uvea or Uea, covering only 62 square miles. A belt of cocoanut-trees girdles these islands close to the coast. Behind the palms is the Soûf; behind the Soûf is the forest; and, lastly, in the very centre rises a plateau of sheer coral, on which a dry, tasteless grass grows. It is only in the Soûf, in hollows where mould collects, that the Kanakas of the Loyalty Islands can cultivate food-plants.

Under the teachings of the missionaries the inhabitants of the Loyalties have been converted to Christianity, and nearly all of them now profess the Protestant or the Roman Catholic faith; beside their maternal dialects, they speak either English or French, or more generally Bishelamar, a childish *patois* formed from a mixture of Polynesian, Papuan, English, and French. The use of Bishelamar is not confined to the Loyalties; it is heard likewise in New Caledonia, the New Hebrides, and elsewhere.

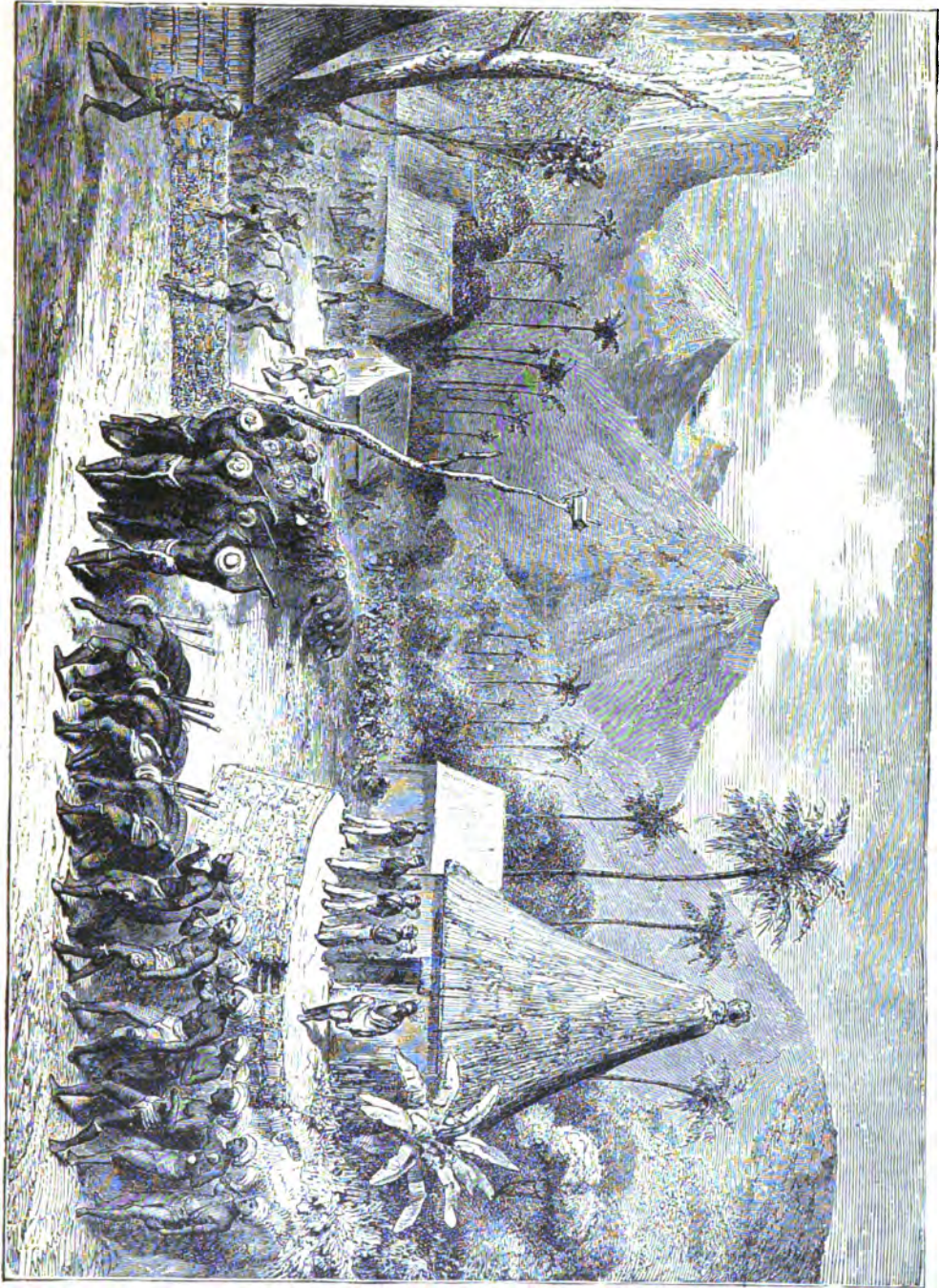
THE FIJI ISLANDS.

The Fijis and Fijians. — Cannibalism. — This charming archipelago extends from the 16th almost to the 20th parallel of south latitude; it is about 1250 miles distant from the New Zealand Auckland, 1860 from the Australian Sydney, and about 5000 from the American San Francisco. It is composed of two large islands, — Viti Levu, or Great Viti, and Vanua Levu, or Great Land, — and possibly 300 small islands, most of which are encircled by coral reefs.

Viti Levu lies under the 18th parallel and extends 85 to 95 miles from west to east, with a width of 25 to 60; the area is nearly 4630 square miles. A belt of land suited to the growth of cotton and sugar-cane and having considerable breadth toward the south-east, though very narrow elsewhere, runs around the extinct volcanoes, which rise from 3000 to 5000 feet. Viti Levu possesses the principal river of the archipelago, the Reva Reva, which pours into the ocean, through four mouths, a mean of 8368 cubic feet per second. Considering the size of the island, the Reva Reva surely merits its other name of Via Levu or Great Stream; its abundance is due to the copiousness of the rains; it is estimated that the mean annual fall on the Fiji Islands is about 108 inches (in 155 days). Here 95, there 120 or 150, are received, and even 240 in places situated in the path of the monsoon.

Vanua Levu rises north-east of Viti Levu, between the 16th and 17th parallels; it is a little longer than the sister island, having a length of 100 miles, but it is much narrower, as its width is scarcely 25 miles from sea to sea. The area is 2510 square miles. Like Viti, it is of volcanic origin; but it apparently attains not over a half the height of Viti, the culminating summits having an altitude of 2300 to 2600 feet.

Compared with these two small continents, where the forests are leafy and deep, the other islands count for almost nothing; most of them are little else than naked islets or coral reefs that make the sea extremely dangerous to navigation. The



A FIJIAN WAR DANCE.

entire archipelago covers a little less than 8000 square miles, and supports at the very most 122,000 Fijians, or, more properly, Vitians, for the correct appellation of the group is the Vitis; the English, its present owners, adopted the name of Fijis, and this is now the official title.

Though subject to the Whites, the Fiji Islands have as yet few white inhabitants, — about 2000, nearly all of whom are of English speech. These are employed in the government service and in trading, or cultivating on very fruitful estates coffee, bananas, cacao, sugar-cane, and other plants, the growth of which is dependent upon great heat and abundant rains. The insignificant number of these English, Australians, Americans, and Germans is not due to the fact that the climate is destructive to the European element. Though the annual mean is 81.5° , with extremes of 56.75° and 95° , the sea-breezes, the elevation and favorable slope of the surface, and the swift flowing rivers, make the archipelago healthful. The Whites do not perform the work on the plantations themselves, but employ for this purpose laborers obtained mainly from among the New Hebrideans of Tanna and from the Gilbert and Bismarck archipelagoes. As for the natives, who hate to labor for the white foreigner, they number 111,000, the remnant of 150,000 found here by the English when they took possession of the islands in 1874. The Fijians, who are slightly mixed with Polynesians from the Tonga and Wallis groups, are Papuans with enormous masses of hair rolled up like a ball. At a distance they have the appearance of wearing a high, black turban a foot and a half in diameter. Until very recently (not more than twenty or thirty years ago) human flesh was the Fijian's greatest luxury. This cannibalism had its source in gormandism; no excuse could be found for it in necessity, as was the case among the savages of the sterile archipelagoes. In former times, every Fijian chief fattened slaves for his table. The method of slaughter was to knock them down with a club or dash out their brains against a stone. Tainted or gamy flesh was considered preferable to that freshly killed. A human body was known as "long pig." The victim was not always killed before being cooked; thousands were thrown alive into the ovens to be roasted on a bed of red-hot stones, under a layer of dirt and leaves. The doomed man was often compelled to make ready the oven himself and gather the wood to heat it. The chief of one of the tribes inhabiting this inhuman land was accustomed, whenever a slave had been served up on his princely table, to deposit a large stone in a spot selected by him for keeping his accounts. When he died, although he was not very old, the pile of stones had become a hill, for he had eaten 872 human beings, among whom were numbered as many friends and feal subjects as indifferent individuals or enemies. Through the labors of the missionaries, the Fijians have been induced to renounce cannibalism; many of them have been converted to Protestantism, but the majority remain faithful to the ancient ideas of the race, to its old conception of the visible and invisible, to its worship of natural forces, or, in other words, to its paganism. The converts have adopted European dress, and now, instead of being naked and clean, they are covered with dirt and vermin.

Before the Europeans became masters of the destinies of this archipelago, cannibalism was so universal, men were so zealously hunted down, wars were so numerous, and affrays so bloody, that it was impossible for the Fijian nation to grow. Since the Whites prohibited head-hunting, thus doing away with one of the principal causes of the decrease of population, the Fijians have not profited by the peace established in their land. The families, instead of increasing, are even diminishing, not

on account of the high death-rate, but because of the low birth-rate. It is said that there are towns on the islands where more than twenty deaths occur to every two or three births, and the country is full of deserted villages. Around these little towns stone walls are crumbling which once defended the inmates against the raids of the semi-Polynesians of Tonga. The latter have been until very recently the hereditary enemies of the Fijians; at the same time they have made their way, forcibly or otherwise, into the Papuan stock, giving it more of beauty, grace, vigor, and intelligence. The Fijians, on the whole, though stalwart and muscular, are effeminate and cowardly, and, though very ingenious, excessively slow-witted. Are they in their declining days? We can readily believe it when we take into consideration the frequency of epidemics which make as large a gap in the population in one year as results in twenty years from the ordinary excess of deaths over births. Not long after the establishment of English rule in the islands, a species of varioloid or of measles carried off forty thousand persons, at that time fully a quarter of the nation,—or, rather, forty thousand persons died from the evils consequent upon careless treatment, from the despair and terror caused by the pestilence, from the malignant fevers engendered by the putrefying bodies, and from the famine caused by the dearth of laborers to till the soil. Though the Fijians are disappearing, they will leave behind them some few cross-breeds. At the 1881 census 832 half-castes were registered.

The Fijian language, which was originally purely Papuan, has been powerfully influenced by the Polynesian idiom spoken by the colonists with whom the race has been mixed; this is especially true along the coast. Its general character has even been transformed so that it has to-day a very close affinity with the language of the Tonga Islands. It is said to be very rich, nicely shaded, and very difficult to acquire on account of the lack of general terms. For instance, there is no verb to express the idea of creeping, as distinct from the animal to which the action is ascribed: the serpent, the worm, every creature that crawls has its special verb to denote the movement; there are fourteen verbs to express the act of cutting, the use of which depends upon the object cut; for beating there are sixteen; and similar peculiarities exist in the substantives. It is said that Fijian contains many words in common with those of the Central African languages belonging to the Bantu trunk.

Mbau, on the eastern shore of Viti Levu, north of the mouth of the Reva Reva, was formerly the Rome of the Fijians; its glory was eclipsed by the rising star of Levuka, a healthful little town in the island of Ovalou; then Levuka in its turn, yielded the palm to Suva, an excellent port on the south-east coast of Viti Levu, not far from the delta of the Reva Reva.

Passing from the Fijians to their neighbors of the Tonga Islands, who have modified them so intrinsically, we pass from Melanesia to Polynesia, where the English have recently annexed a small mountainous island called Rotumah; this islet, covered with cocoanut-trees, lies in 12° 30' south latitude. It is occupied by 2300 inhabitants, who resemble the Tahitians, but who assert that they are descended from the Samoans.

POLYNESIA.

The Polynesians. — Beauty of their Islands, Gayety of their Life. — The Maoris of New Zealand are not the only men of their race in the vast Pacific. From the double island to the Sandwich Archipelago, and from Tonga to Easter Island, savages akin to those of New Zealand people countless Sporades and Cyclades, all of which combined would hardly make a diminutive kingdom. These men are copper-colored or bronzed, of huge stature, supple, graceful, and handsome. It is a mixed race, and certainly counts among its ancestors — by the side of Negroids and Malays — some people of fair complexion and noble features. The Polynesians all speak dialects of the same soft, vocalic language. They all cherish the same customs, the same ideas, the same traditions, and all have the same fondness for the sea and the same passion for the canoe. Their life flows on in gayety and ease, untroubled by any thought or care for the future, in islands the most charming that the imagination can picture, under glowing skies, on the shores of a luminous sea, along fruitful beaches, and in the shadow of bread-fruit-trees, three of which can furnish subsistence for a man during his lifetime. The Polynesian's good-fortune is at the same time his ill-fortune, for if he passes his days lazily and peacefully in marvellous islands (the atolls excepted, which are of dry, barren coral), the very beauty of his abode attracts the Whites, who, aside from a few missionaries, come to carry on commerce — that is to plunder — or to govern — that is to damage and destroy.

Almost all of the Polynesians have accepted at least outwardly the teachings of Protestantism or Roman Catholicism, and, with a deeper and truer fervor, they have adopted the vices introduced by white adventurers, if so be that Europe could initiate savages, already terribly corrupted, into deeper mysteries of sin. Though the South Sea Islanders may have practised all the abominations which Europeans are charged with having taught them, long before the advent of the Whites in their islands, their contact with the latter has brought them many eruptive and contagious diseases.

Since the arrival of the Caucasian, they have rapidly decreased in numbers; they are not a fertile race, and they practise infanticide. Lung-diseases, small-pox, measles, and other scourges, resulting in part from the fact that they go clad or unclad alternately (having been constrained by the missionaries to wear clothes that are more than useless in these hot climates), — these diseases more than syphilis or poisoned alcoholic drinks threaten death to the Polynesian tribes; it is possible that the Pacific sun will soon rise over waters from which the last Polynesian has disappeared, — half-castes aside, for a race is never entirely effaced. And the white man will say "I have civilized the South Seas."

Though the Polynesians have no greater degree of race unity than the other peoples of the globe, though we encounter from island to island, from caste to caste, from man to man, faces and physiques recalling the black, the yellow, and the white races, they nevertheless possess a unity of language (dialects aside) over a tract of sea three times the size of Europe, and also a unity of thought, ideas, institutions, and customs. From end to end of their charming archipelagoes, the Polynesians were once addicted to cannibalism, and here and there they still indulge in this horrible barbarity with all its attendant customs and practices. They all tattoo themselves

that is, they engrave indelible designs on their faces, chests, and limbs, — a species of documents visible from long distances, where are written in hieroglyphics their civil status, their caste, their titles of nobility, and their notable exploits.

SAMOA.¹

This charming archipelago which has become famous of late because of the rival interests of the English, Americans, and Germans, comprises 1160 square miles, with 36,000 inhabitants; it is situated under the 13th parallel of south latitude. It was once proposed to call it the Bougainville Archipelago, in honor of the famous French navigator who was the first to explore the islands in detail (1768). Although Samoa and Tongatabu are the only Polynesian lands in which the language contains a sibilant, it would perhaps be better to spell Samoa,² *Hamoa*. — As for the name Navigators' Islands, it is a literal translation of the word *Hamoa*, but it might just as well be applied to any of the other groups peopled by Polynesians, for they are all skilful in the management of their pirogues.

With Tonga (and with better reason still), the Samoan group is entitled to be called the parent land of Polynesia. A comparison of the traditions, genealogies, and popular songs of all the Polynesian tribes has established this fact almost beyond question. The Samoans, like the Tongans, also came from the north-west, perhaps from Bouru, one of the large Moluccas. When they had peopled their little archipelago, they journeyed afar over the pathless deep in flotillas of slender canoes, and in this fashion they populated Tahiti, — which in its turn became a parent land, — the southern Marquesas, and perhaps New Zealand; they sent emigrants as far as the Gilbert Islands in Micronesia; hence the almost complete identity of language, and the remarkable facial resemblance existing in the islands scattered over the vast Polynesian sea.

Like the Tahitians, the Samoans, who are independent, or reputed to be such, are not diminishing at present, but, on the contrary, are slightly augmenting. They amount to 36,000, the remnant of the 80,000 of last century, if the archipelago did, in fact, ever contain 80,000 inhabitants; hasty estimates of population are always unreliable, for a mass of people in some given place is often taken to represent the normal density of the country. Of these 36,000 persons, Protestantism lays claim to about 30,000, while Catholicism has received into its bosom the other 6000. There are 300 or 400 Whites representing the powerful, denationalizing nations of England, the United States, and Germany. Though a knowledge of the English language has been widely diffused through the efforts of the Protestant missionaries, the Polynesian tongue of the Samoans still lives; it is written and spoken, it is preached in the temples and chapels, it is chanted in Christian hymns, and it is heard in the obscene songs which are so common among the Polynesians; it resembles, in its essential character, the dialect of Tahiti, and, except for various consonantal changes from one language to the other, most of the words are identical.

The Samoans are among the tallest people on the globe, and they are certainly

¹ See page 900.

² The word Samoa is usually said to be derived from *Moa*, the hereditary appellation of the king of Manua, and the particle *Sa*, which prefixed to a proper name signifies, in the Samoan tongue, "the family of." Hence Samoa may mean, and probably does, the family of Moa. — Ed.

among the best made physically; they are graceful, dignified, and courageous, and their courage is often put to the test in civil wars. They tattoo themselves from the knees upward, but they no longer display to the extent which they formerly did these designs of which they were so proud, for many of them, renouncing Satan and his pomps, have abandoned the semi-nudity of the olden days, and the missionaries are gradually clothing them entirely *à l'européenne*. Their principal islands are:

Upolu, more charming than Tahiti itself, with a gently rolling wooded surface reaching elevations of 3000 feet. It contains Apia, a half European village;

Savaii, which attains a loftier elevation (3510 feet), and is much larger, disputing with Hawaii the honor of being the traditional Hawaiki, whence the train of canoes set out which bore the Maoris to New Zealand;

Tutuila, Manua, near a submarine volcano, Sili, Ofu, etc.; all the Samoan group, including Savaii and Upolu, are surrounded by a breakwater of coral.

TONGA

This archipelago was formerly called the Friendly Islands, a name derived from a chance impression received by the discoverer (Captain Cook) on a hasty visit; the hazards of another moment would probably have given it the title of Hostile Islands. As for the name Tonga, it signifies in Polynesian the "islands": it follows, therefore, that the expression Tonga Islands is tautological.

The group embraces 150 small islands and islets, making all together less than 400 square miles. Almost all the islands are low, the atolls and coral reefs especially, and few of them rise above 160 feet. They dot the sea between the 10th and 22d parallels south latitude. The inhabitants number 20,000 to 25,000. They are well formed, and of joyous, laughter-loving disposition; they incline toward the Negroid type and have doubtless been much mixed with the Fijian race, if they are not in fact Fijians who have been subjected to the influences of an element more purely "Polynesian" than the Papuan element. These extraordinarily prolific people have sent throngs of emigrants to the different Pacific islands, notably to the Fijis: they have, therefore, flowed back toward the probable sources of their race, but they have done this as conquerors rather than as friends. The *tuas*, a species of slaves, are descendants of the old conquered race. The Tongans have all become Christians in name and form of worship, but, as can be readily believed, they are still deeply influenced by their ancient lore and their old conscience. About 5500 children have been gathered into schools here, and the group is gradually becoming Europeanized, at least outwardly; it has a sort of constitutional government, and a parliament with the party divisions of European countries. Many of the Tongans write and speak English, which has been brought into the archipelago through commerce, and through the Protestant missions, which have made more converts than the Roman Catholic.

The principal island, which embraces nearly a third of the area of the archipelago, and more than a third of the population, is called Tongatabu, or Holy Island. Vavao peopled Nukahiwa and the other northern Marquesas. The basaltic and doleritic Tufoa supports a low but dangerous volcano. On Laté rises the culminating peak of Tonga.

The Wallis and Fotuna Islands.—North of Tonga is the Wallis group (10 sq. m.),

the principal island of which is Uvéa. The 5000 inhabitants, who have been converted to Roman Catholicism by the French, have just been subordinated to French rule. They are increasing in numbers.

North-west of Wallis are the Fotunas (21 sq. m.), volcanic islets supporting 2500 inhabitants, who have become good Roman Catholics, and who are increasing like the islanders of the Wallis archipelago.

COOK ARCHIPELAGO.

Cook Archipelago is named in honor of its discoverer, Captain James Cook, the celebrated navigator. It is also sometimes called the Hervey Archipelago, but, properly speaking, the Herveys are merely the smallest two and the most sparsely peopled



HUTS OF THE COOK ISLANDERS.

of the islands. None of the group has any considerable size; they are all girdled with coral reefs and lie north and south of the 20th parallel. Together they comprise 306 square miles with 8900 inhabitants. Nine only are of sufficient size to

be entitled to be called islands; these are either volcanic or coralline, and are difficult of access owing to their dangerous reefs and a deficiency of harbors. The largest, and at the same time the only ones which rise in mountains, are Mungaia (26 sq. m.) and Rarotonga (30 sq. m.), the latter reaching an elevation of nearly 2950 feet. It is thought that several of the waves of migration which peopled Polynesia with a homogeneous race started from Rarotonga.

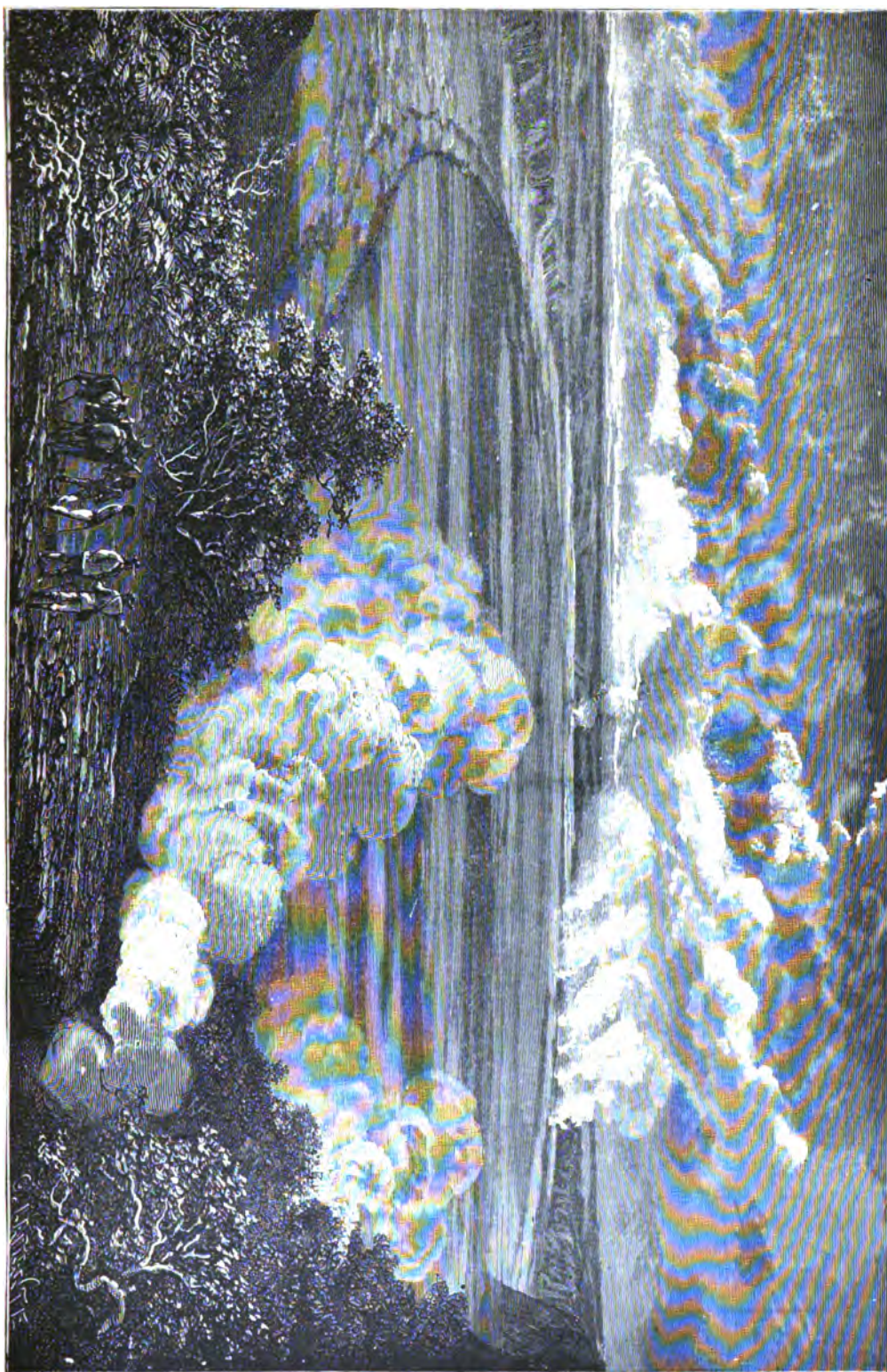
Thirty or forty years ago many of the inhabitants of the Cook Islands were fierce man-hunters and cannibals; but cannibalism has disappeared under the influence of the English missionaries.

The Polynesian Sporades. — From the Cook Islands, a long train of scattered islets runs off in the direction of the Sandwich Archipelago, which lies 40 degrees away, the Sandwich group being under the 20th parallel of north latitude, and the cluster in which Rarotonga dominates lying under the 20th parallel of south latitude. All together we call this chain the Polynesian Sporades, though different names are applied to different groups. They are mostly coralline, low and covered with cocoa-nut-trees; many of them contain guano deposits which have been exploited and already nearly exhausted by the English and the Americans. Among them we note Malden (34 sq. m.), arid and empty: Christmas Island, with a circuit of 52 miles; and Fanning (21 sq. m.).

HAWAII OR THE SANDWICH ISLANDS.

Next to New Zealand, this is the most extensive of all the Polynesian archipelagoes, but it is also the one where the Polynesian race is decreasing to a most lamentable degree. It is becoming more and more the custom to call the entire group Hawaii, from the name of the principal island, which embraces 4400 out of the 6548 square miles of the archipelago. The Sandwich Islands rise from the sea at a long distance from the waves which roar or murmur along the shores of the other Polynesian islands. They lie in the vicinity of the tropic of Cancer, on the route from California to China, the Indo-Chinese archipelago and India.

Hawaii: Mauna Loa, Kilauea. — Hawaii, which might be called the corner-stone of the country if it did not at the same time constitute two-thirds of the structure, rises in the south-eastern part of the archipelago, under the 19th and 20th parallels; it has an area of 4385 square miles and contains 25,000 inhabitants. It rears the most powerful volcano in the world, Mauna Loa or Grand Mountain (13,760 feet). It might more appropriately be named Smoking Mountain or Red Mountain. There is not another crater on the globe that brews in its caldron such quantities of glowing lava as Kilauea, a fiery lake resting on the flank of the giant Mauna Loa, at an elevation of over 3900 feet and having a circuit of 7 miles. When the seething lava is emptied from the crater, as happened in 1840, 1866, and 1880–1881, it is 1475 feet from the rim to the vent-hole where the black shades begin; when the burning floods palpitate, when the monster groans and roars, when he hisses and smokes, a heavy, devouring stream overflows from the vast, irregular abyss of the crater, and spreads over the island; and when the river stops in its course, it has blotted out many a



KILAUEA.

valley and glen. The eruption of 1880-1881 lasted 268 days, and the lava-flood, lit up at night by columns of blood-red fire, moved 315,000 feet, from the jaws of Kilauea very near to the port of Hilo. A little loftier, though much less destructive is Mauna Kea (13,954 feet), or White Mountain, so called from a few patches of snow which remain in summer in the folds of the mountains. Mauna Hualalai, whose throes were once much dreaded, has slumbered since the early years of the present century.

As in Iceland, — though in a very different climate, — Hawaii owes its great sterility to the coating of lava which is always faithfully renewed before it has been broken up and disintegrated by time. Except for a few charming glens and an occasional large forest, this is a harsh, arid block, with few streams, for the water all sinks through fissures into the hollows under the stratum of lava; the Waipio, a torrent north of Mauna Loa, makes a leap of nearly 2300 feet.

Many antiquarians believe Hawaii to be the Hawaiki of tradition, the ancient home of the Maoris.

The Lesser Sandwich Islands. — The other islands of the group lie directly to the north-west, running in a straight line as far as Kauai and Niihau, situated under the 22d parallel north.

Maui (490 sq. m.), 25 miles from Hawaii, bears a mountain of 10,171 feet, called Haleakala, or the Mansion of the Sun, a quiescent or extinct volcano; Maui supports 16,000 inhabitants; the chief of its five dependent islands is named Kahulawi (55 sq. m.)

Lanai (116 sq. m.) supports only 214 persons; it is exceedingly barren, on account of a very scant rainfall on its volcanic soil.

Molokai (190 sq. m.) is an ungainly island containing 2400 inhabitants. It has no mountain which attains an elevation of 4000 or even of 3500 feet: it is nevertheless so uneven and broken that it has received the name of Kaainapali, signifying Land of Precipices. It contains one of the most melancholy settlements in the world, a village of 800 lepers, rigidly isolated from the rest of mankind: a cure would bring pardon to them, but they never recover, and die in exile.

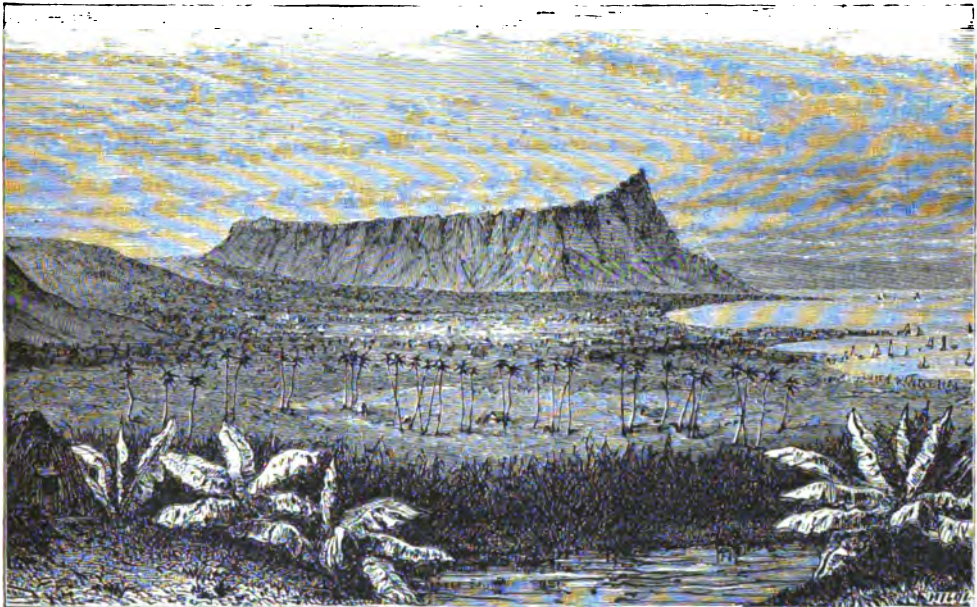
Oahu is more fruitful than its sisters, but like them it is volcanic; it has a mountain 3891 feet in elevation. It contains the metropolis of all these islands, Honolulu (pop. 20,000), a magnificent port. On Oahu's 650 square miles there are 28,000 inhabitants.

Kauai (550 sq. m.) consists of old lava which, since the volcanoes have been quiescent, has formed a fertile soil; sugar-cane thrives here and the olive-tree is becoming acclimated. The population, nevertheless, numbers only 8700 persons, who occupy favored valleys and admirable cirques. A peak of 6234 feet casts its shadow at certain hours of the day over valleys of harmonious outline. Niihau (112 sq. m.), an adjacent island, is sterile and bare, with only 200 inhabitants.

Kanakas and Whites: Chinese and Portuguese. — When Cook discovered this archipelago, in 1778,¹ he estimated the population at the generous figure of 400,000; the number was surely exaggerated. But there is no doubt that the native population has decreased with alarming rapidity since that time. In 1823, the Kanakas of the Sandwich Islands numbered 142,000; in 1850, 84,000 remained; in 1860, 70,000; in 1866, 63,000; in 1878, 44,088; in 1884, the census returned 40,014 out of a population of 80,578.

¹ The *Boletin de la Soc. Geog. de Madrid*, 1877, states that a discovery had been made by the Spaniards previous to this date. — Ed.

While the number of the Hawaiians is shrinking thus, that of the foreigners is increasing. The augment is not so much among the English and Americans, who were formerly the chief exploiters of these islands, and who brought them under the sway of Protestantism and imposed upon them their language as the official idiom by the side of Polynesian, but at this moment a new order of things is being instituted, which may possibly deprive the English-speaking Protestants of their prestige in Hawaii. The extraordinary activity of Chinese immigration was threatening destruction to the little Polynesian people; nearly 18,000 of these Yellows had already invaded the archipelago, when the Honolulu rulers, in their terror of "John Chinaman," turned for relief to almost the only Christian people — Roman Catholic, it is true — possessed of sufficient endurance to labor at all hours of the day the year



ON THE COAST OF OAHU.

round under a burning tropical sky. These men are the Portuguese from the African islands, and they are now coming by thousands into Hawaii. They are vigorous peasants who will not become Anglicized, and it will be impossible to "Kanakaze" them if re-enforcements continue to arrive every year from the mother-lands—from the Azores, Madeira, and the Cape Verdes—in proportion as hands are needed to plant and cut the sugar-cane, take care of the precious woods, harvest the cotton and coffee, and tend the herds and flocks in the pastures. The census of 1878, which was anterior to the great Chinese immigration, returned 1276 Americans, 883 English, etc., and 3420 half-castes; these last are the hope of the Polynesian race in Hawaii, which will not go down without a struggle for life. The Sandwich Islanders no longer content themselves with fearing the Chinese and attempting to proscribe them, nor with calling the Lusitanians of the African islands to their aid: they are at present introducing into the archipelago Micronesians and Polynesians, who are more or less

closely allied to themselves in race and speech, and they also hope to welcome Maoris from New Zealand.

It is in the Sandwich Islands, on the very confines of the Polynesian domains, that the childish language of this race contains the fewest number of consonants: the Hawaiian dialect has only five consonants, while there are ten in the Maori and Tahitian tongues, and fifteen are in use in the speech of the Tonga Islanders.

THE FRENCH SPORADES.

The Society Islands: Tahiti. — Near the 17th parallel S. lie the Society Islands, among which the most famous, the most beautiful, and the most extensive is Tahiti; it contains 402 square miles. It is composed of two sections, of unequal size but closely resembling each other; both rise in a succession of bold terraces toward central peaks, and they are connected by a low, slender isthmus. They have the same graceful outlines and the same grandeur. Their form is intermediate between the circle and the ellipse. Tahiti possesses an ideal climate, with a mean of 75° F. in the plains and valleys along the shore, a low-temperature extreme of 60°, 59°, or 57°, and a maximum of 91°. Nearly the entire Tahitian nation dwells along the coast, amid groves of fruit trees and forest trees that spring spontaneously from the soil, warmed by the sun and fed by the rains of this favored clime. The men are tall and well formed, the women pretty and seductive.

Quitting the hem of the waves, we begin almost immediately the ascent of the mountains. In the main island we can climb to an elevation of 7340 feet, the altitude of Mount Orohena; in the smaller section, Mount Koniu (3707 feet) is only half the height of the Tahitian giant. Several of the mountains were once volcanoes; they are all mute now, — such as the Diadem, — and it is often between black basaltic cliffs that the sun throws rainbow hues over the cataracts of the torrents which, fed by the heavy and long rains, rumble tirelessly down the steep mountain sides and over the rugged slopes.

It is estimated that Tahiti contains not more than 120 square miles of cultivable soil on its mountain piles; but these 120 square miles might be transformed into an Armida's garden, in which 200,000 Tahitians could thrive. At present the island supports only 11,000, including its large annex on the west, Moorea or Eimeo (50 sq. m.), — a very charming island encircling a mountain more than 3900 feet in elevation, — and including also the two islets of Tetuaroa, on the north, and Maitea (1698 feet), on the east. The Tahitians live without a care; they gather the bread-fruit, bananas, and cocoa-nuts; they bask in the morning and evening sun, they delight in the noonday shade; they sport in the limpid streams and the smiling sea. They have retained all the enjoyments of a primitive state of existence, at least such of them as have not caught the anxieties and the maladies of a decadent people from the Europeans. But it must be said that it is now necessary to visit the remoter villages of the interior in order to witness in their original form the voluptuous dances which were formerly common everywhere on this enchanting island. The Tahitians are still passionately fond of amusements, they are heedless and childish, and addicted to intemperance. The prevalence of habits of intoxication dates from the advent of the missionaries in

the islands, who have very injudiciously forbidden the dancing and singing of former days.

It is believed to have been these islanders, descended, it is said, from Samoans, who sent far away to the northward the men that first witnessed the flaming of the Hawaiian volcanoes. Did they number, as is claimed, 80,000 when Cook landed in Tahiti, before any other European, or when Bougainville, amazed at the beauty of the island, named it New Cythera? Probably not; but they diminished later on with



PAPETE.

astonishing rapidity. At one time it was even thought that they had disappeared, but for the last few years they have been augmenting. The French have colonized but slowly here, and the native population has not been drowned out. The protectorate of 1842 having become direct possession, France will crowd the Tahitians more than she has hitherto done. Still, as they live upon little and do not sell their lands, they will disappear only so far as their language is concerned; they will probably form alliances with the French and the race will be perpetuated under the name and appearance of Frenchmen. Of the 10,800 inhabitants returned by the census of 1881,

nearly 1000 are French, about 600 other Europeans or Americans, and nearly 500 Chinese. The Polynesians of these islands are mostly Protestants, the rest are Roman Catholics (though all are pagans in reality), converted to Christianity by missionaries largely from England. They have been subject for a long time to British influence much more than to French, and many of them speak the English language. — The capital, Papeete, is a mere village on a very safe harbor protected by a coral reef.

Huahine, Raiatea, Tahaa, Borabora. — The other Society Islands, which are neither protected nor possessed by France, are:

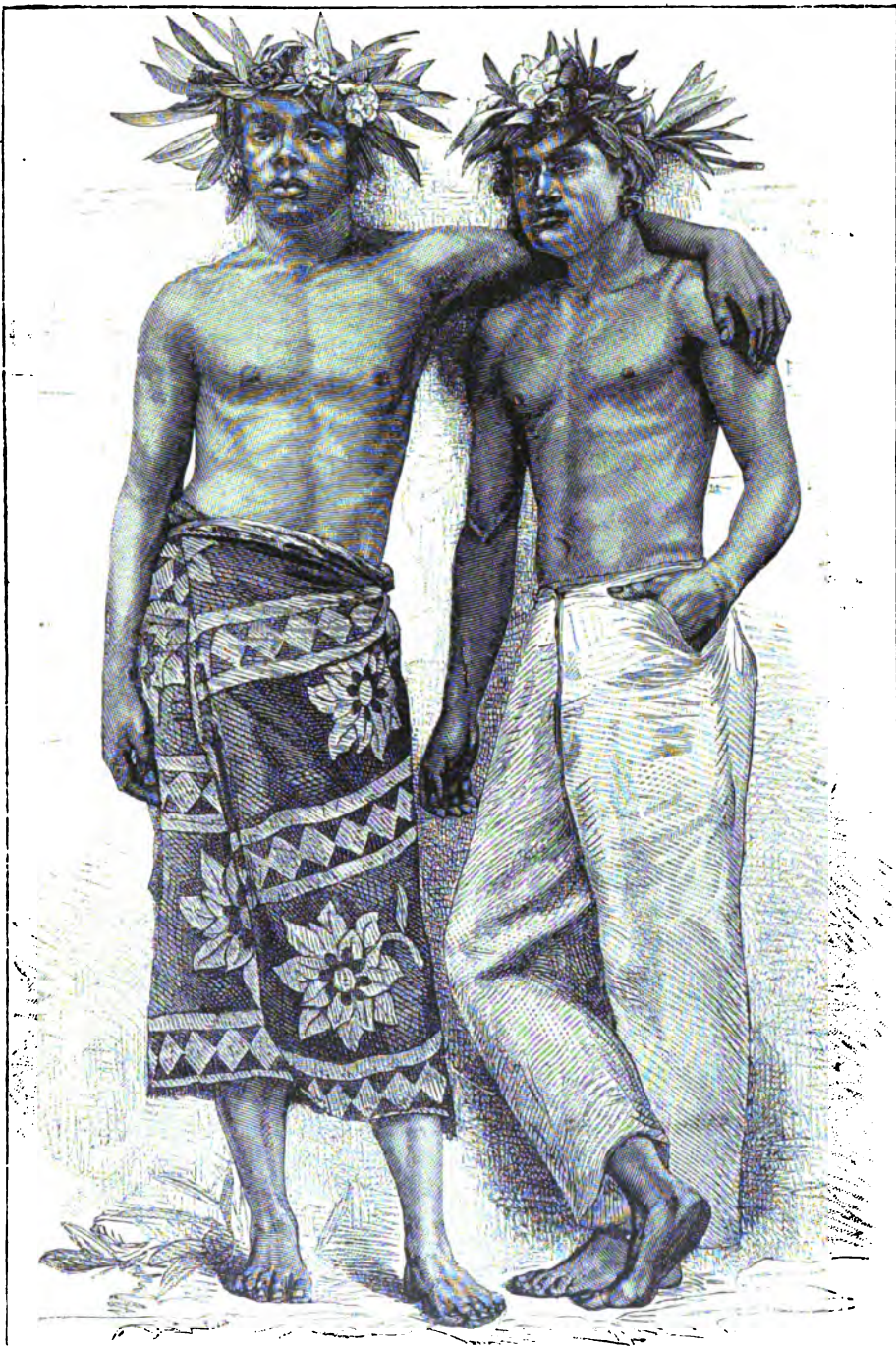
Huahine (28 sq. m.), 100 miles west-north-west of Tahiti. It is surrounded by coral reefs. A channel of modern origin divides it into two sections. Its volcanic soil is owned and occupied by 1665 Polynesians.

Raiatea, a third larger than the preceding, but scarcely as populous, has an elevation of 1970 feet; it is girdled with a belt of coral like its neighbor on the north, Tahaa. The latter, which has about the same area as Huahine, contains about 1500 inhabitants. [Raiatea was placed under French protection in 1887.]

Borabora, a double-headed mountain of something less than 2000 feet, is, like its sisters, encircled by coralline reefs. It contains 1800 inhabitants, who have at their disposal about 20 square miles of territory. Tubai or Motuiti and Maupiti are much like the other members of the group.

The people of these islands all resemble the Tahitians. English missionaries have succeeded in inducing them to profess Christianity according to the forms of the Anglican Church. The independent islands embrace together 195 square miles, with a population of 7500, or, according to some authorities, 3500. They have been Europeanized to a certain extent, and show an inclination to adopt all the vices of Europe.

The Marquesas Islands. — The Marquesas, which are of volcanic origin, bear a resemblance to the Navigators' group in general appearance and in coast outlines. They have been but slightly assimilated as yet by France. There are only 80 Frenchmen among the inhabitants, to nearly 100 other Europeans and less than 5000 Polynesians — all on 500 square miles, in eleven islands scattered between the 8th and 11th parallels of south latitude, fully 750 miles north-west of Tahiti. Two of the islands are much larger than the others, namely, Nukahiwa and Hiwa-Oa. Nukahiwa nearly touches the 9th parallel with its southern capes. In the beauty of its sea, the harmonious outlines of its mountain, and the charms of its sky, it is another Tahiti, though smaller and less enchanting. It rears its culminating rock to a height of 3865 feet, or a half the stature of the Tahitian Orohena. There is a sort of central plateau, called the Towii, from which the torrents fall like avalanches on the neighboring shore, and one of them makes a leap of 1100 feet, or, it is even said, of 2130. Along the rim of the waves we encounter here and there valley expansions where soil, sun, and rain are favorable to the growth of bread-fruit, cocoa-nuts, bananas, sugar-cane, cotton, coffee, and taro, the root of which is much liked by the natives. Nukahiwa might be made to produce everything, but even the few Kanakas now inhabiting it are rapidly dying out, and the island in fact produces almost nothing. In 1855 the population numbered 2700; 17 years later not more than 1600 remained. As for the French, they nearly all live at Taiohai, a small but busy port, on a charming bay of the southern coast. This village is the capital of the Marquesas Islands, for it is here that the French Commissioner resides.



TAHITIAN TYPES.

Hiwa-Oa, like the other islands of the archipelago, has belonged to France since 1842, but the French did not enter it until 1880, when they took possession of it to avenge the death of two sailors who had been eaten the previous year by the tattooed cannibal inhabitants. Hiwa-Oa is a volcanic block 4134 feet high, the loftiest in the archipelago. Almost all its glens are uninhabited to-day; in 1872, only 3000 souls remained, against 6000 in 1855. A similar shrinking process is going on all through the Marquesas group: in Tauata, Hiwa-Oa's rugged satellite, the same seventeen years (1855-1872) witnessed a decrease of the population from 600 to 300; in Fatdhiwa, an extinct volcano of 3675 feet, there were 1200 souls in 1855, in 1872 only 250 remained; the population of Huapoa (3901 feet) diminished in the same period from 1100 to 900, that of Huahuna (2428 feet) from 300 to 19; Hiau, which seems to have been always uninhabited, swells above the waves 2100 feet.

In 1855, 11,900 inhabitants; in 1872, 6045! And less than 5200 to-day! Whence this rapid depopulation of the Marquesas Islands? The cause is not to be sought in emigration, but in the ravages made by Death, who never retreats here before a flood of new-comers into life. France, nevertheless, has not brutalized these Polynesians; she has left them to their past in so far as their grouping into tribes, their maxims of government, their worship, their ideas and philosophies are concerned. She has, however, put an end to civil warfare and cannibalism, and for this reason an increase of population would naturally be looked for. But, like the Maoris, the Fijians, and the Hawaiians, the Marquesans are diminishing in numbers.

The Tubuai Islands.—A few hundred miles south of Tahiti, lying partly north and partly south of the tropic of Capricorn, are the Tubuai Islands, which have belonged to France since 1881. A very small contribution to the possessions of the French Republic, for the entire group can put into line only 356 inhabitants, a half of whom live on Ravaivai. The loftiest and at the same time the largest of the islands is Tubuai (40 sq. m.) from which the archipelago derives its name. These two major islands and Rimatara, Ohiteroa or Rurutu, and Narurota, an uninhabited islet, constitute the Tubuai Islands, or, as they are also called, the Austral Islands. Together they embrace 110 square miles. They were wholly uninhabited when, toward the end of the last century, a few Tahitians arrived. The inhabitants, therefore, belong to the most beautiful of all the Polynesian families. There are only 8 Whites among them, and 5 of these are Frenchmen.

Oparo.—Three hundred and sixty miles south-east of the Austral Islands is Oparo or Rapa; this island, which now belongs to the French, is valueless except as a place for ships to put in on the route from Europe to New Zealand by way of Panama. It has an area of 16 square miles and contains a peak 2172 feet in elevation. The 150 inhabitants are of good physique, gentle and amiable. They live under a very tame sky, in a temperature rarely rising above 75° F. Sterile and solitary, the island looks out over a limitless sea and up to a cloudless sky.

There are remains of native forts, built of huge stones, on the tops of the highest hills. The blocks are well squared and smoothed, and joined with a hard cement. Some of them weigh fully two tons.

The Tuamotu Islands.—East and south-east of Tahiti are the Tuamotu Islands, which likewise form a part of the French colonial possessions. This Polynesian name signifies "distant islands," and the group is in fact far away from Tahiti, between the 14th and 25th degrees of south latitude. Though stretching through 1550 miles, from the first on the north-west to the last on the south-east, and though numbering

79, not including islets and reefs, they nevertheless embrace only 348 square miles, with 5091 inhabitants, of whom 1050 are in Anaa.

Before France, out of regard for her new subjects of Tahiti, bestowed the present name upon the group, it was called Paumotu, or the Conquered. The most appropriate appellations are the old names of Low Archipelago and Dangerous Archipelago: the islands are low, for the volcanic forces have hardly lifted them above the level to which they were raised by the polypes, and the reefs are extremely dangerous to navigation. There are no mountains, no streams nor springs. The land is dry and sterile, offering no productive soil to the inhabitants. These inhabitants are Polyne-sians in language rather than lineage — for the Tahitians have been mixed here with Negroids of unknown parentage. They subsist on fish, and on the taro-root and cocoa-nuts: the cocoa-nut palm, which is always found on coral reefs, grows here on the outer shore, along the sea, or on the inner margin, bordering the pale green waters of the lagoon, which are constantly renewed through the narrow passes left by the coral animals in the circular dike of the atolls.

The Gambier Islands. — The Gambier or Mangareva Islands lie south-east of the Tuamotu group, in the vicinity of the tropic of Capricorn. They have been under French protection since 1844; they are the cemetery of a Polynesian people. In 1844 there was a population of 1800 or 2000 where to-day 445 individuals are to be found. The Mangarevans were originally cannibals, but through the labors of Roman Catholic missionaries they have been induced to adopt Christianity, and they are now peaceable and tame. They derive their name from the humid and fertile little island of Mangareva, the chief member of the group. It is an entirely mountainous island, and contains a worn-out volcano named Mount Duff (1083 feet). Taravai, Akamaru, Aokena, Kamakha, etc., add enough to the area of Mangareva to carry the whole archipelago to 12 square miles.

EASTER ISLAND.

Giant Statues. — A Decadent People. — Easter Island lies not far from the 27th parallel S., at a long distance from the French Sporades, and at the same time a little nearer to the Chilian coast of South America than to Tabiti. It rises isolate and rugged out of a boundless sea. It is called also Waihu, Mata Kiteraghe, Rapa Nui, and Tepito-te-Fenua. The last is the true name of the island, but any one of these indigenous titles is preferable to the civilized appellation bestowed upon it in 1722 by the Dutch admiral who discovered it. It was on Easter Sunday that the rock was first seen by Europeans, and Tepito-te-Fenua became Easter Island.

It is not over 30 miles in circuit, and the area is about 45 square miles. The volcanoes are extinct, but they are still clearly distinguishable by the reddish craters; one of these craters, that of Kau, is a huge, symmetrical, well-like opening, more than two miles in circumference and over 800 feet deep. The highest summit of the island dominates the sea by not more than 1500 feet. The soil consists of red lava and pumice-stone, and produces nothing but bushes; there are no trees, and but very little water. Although lying in the latitude corresponding to that of the north of the Red Sea, the climate is far from clement. The ocean is terribly rough, and mildness,

warmth, and heat are all unknown, except in the hollows of the extinct craters, where one is sheltered from the blasts from the sea.

Not longer ago than 1860 Easter Island contained 3000 inhabitants¹; these were pagan Polynesians whose ancestors came, according to their traditions, in two pirogues from an island far away to the westward. When these navigators, driven by the western winds, landed in Tepito-te-Fenua, it was not uninhabited. They found there a people, all the males of which they immediately massacred. Then they formed alliances with the wives and daughters of the slain, and from these unions sprang the race of men who carved the 200 statues—from 20 to 36 feet in height—which are to be seen to-day in the island, some upright, others prostrate, some broken, others intact. One of these is 75 feet tall, or twice the height of any of the others, but the sculptor did not complete his work. The images are in fact busts rather than statues. The face, which is said to have a striking resemblance to those carved in ancient times by the Aymaras of Peru, occupies fully a half of the figure. These busts were idols—gods cut out of trachytic lava, each bearing his own name, which is still remembered by the aged men on the island, although two centuries and a half have elapsed since the artists of Tepito-te-Fenua ceased to chisel in the rocks the images of the sovereign rulers of heaven and earth. Like many an old European sculptor who gave a life-time to the portal of a cathedral, the Polynesian artist, it seems, devoted all his days to the carving of these colossal deities, content if from youth to old age he succeeded in chiselling one or two.

Though they have adopted Roman Catholicism through the teachings of French missionaries, these Kanakas have remained pagan at heart, and they still have faith in the power of the old divinities. Not, however, in those whose images have been overthrown, for, according to the legend, these perished during a nightly battle between the idols: every god, every spirit, whose likeness was defaced by the image of a rival spirit or god, gave up the ghost immediately, but the omnipotent deities represented by the colossi still standing retained all their power. From 3000 the inhabitants have diminished to 150,² and the decrease goes steadily forward. There are in all 67 men, 39 women, and 44 children. For each new birth there are three deaths, and ere long the solitary nation cast on this wind-beaten rock will be extinct. Yet it was a vigorous, active people when in the fervor of youth it added gods of stone to gods of stone: possibly 6000 inhabitants once cultivated the soil belched from these volcanoes, or fished in the surrounding seas. Their descendants have been drawn away to work the plantations of the Polynesian islands and to extract guano from the Peruvian rocks; diseases of various kinds have carried off the rest, and immortal nature has ceased to renew herself in Easter Island.

¹ The number is also given at 1000.

² Of whom 20 are Tahitians.

ADDENDA

TO THE AMERICAN EDITION.

Since the publication of M. Reclus's work, the Pacific islands, which were until a comparatively recent date "a region of romance and adventure," a field for occasional missionary labor or for commercial enterprise, have been assuming a more and more important rôle in the play of the practical politics of the world. The immediate cause of this change lies in the active efforts of Germany to secure her trade and establish her power at several important points in the islands. For the sake of a clear understanding of the significance of Germany's recent proceedings in the Pacific, we outline briefly the position of the various European powers—Spain, France, Great Britain, and Holland—in Oceanica at the moment when (in 1885) Prince Bismarck startled the world by one of those bold moves of which he was then master, namely, the declaration of German sovereignty: (1) over that portion of New Guinea which does not lie under Dutch or English sovereignty; and (2) over the islands of this part of New Guinea, and the islands of the archipelago previously known as New Britain, and now renamed Bismarck Archipelago, and all other islands northeast of New Guinea, between the equator and 8° of south latitude and between 141° and 154° of east longitude. We follow M. Reclus's grouping of the islands, that is, making Oceanica embrace Australia, and also the northern archipelagoes formerly attached to Asia—the Sundas and Philippines.

Spain: the Philippines and Sulus, the Mariana Islands, and claiming the Carolines, and Pelews.

France: New Caledonia, including the Loyalty Islands and Isle of Pines, and Tahiti, with the Marquesas Islands, the Low Archipelago, the Tubuai group, and the Gambier Islands.

Great Britain: Australia, with New Zealand, Tasmania, and part of New Guinea, the Fiji Islands, the Island of Rotumah, and all the islets and rocks between the 12th and 15th parallels south latitude and the 175th and 180th east longitude.

Holland: all the Sundas except northern Borneo and eastern Timor, the Moluccas, and western New Guinea.

Germany had little or nothing to do with the early explorations in the Pacific, but within the present century German merchants and traders had established themselves without any government aid in many of the islands, especially in the Friendly group and in Samoa, building up powerful monopolies in various kinds of trade. One of the most successful of these commercial companies was the firm of J. C. Godeffroy

& Son, who had almost a monopoly of the copra¹ or cobra trade in the Pacific. But in 1880 the sudden fall of copra prices forced this powerful Hamburg firm to suspend payment. It was then that the Imperial Government began to support the trading interest with its naval forces and through consular intervention. In 1880 formal treaties of commerce were signed with Tonga and Samoa.

Then followed the *coup de main* of 1885—the annexation of a part of New Guinea, to which the name Kaiser Wilhelms Land was given (in honor of the Emperor) and of New Britain Archipelago, now known as Bismarck Archipelago (in honor of the Chancellor). About 90,000 square miles were thus, by a stroke of the pen, added to the German Empire. In April, 1883, the portion of New Guinea not under Dutch rule had been formally taken possession of by Mr. H. M. Chester in the name of the Queen and the Queensland government. But the British Parliament had thus far refused to ratify the action of Queensland, when suddenly a portion of New Guinea became Kaiser Wilhelms Land, and New Britain was transformed into Bismarck Archipelago. The movements of the German Chancellor were more effective than the representations of the Australian Colonies had been, and England was at last aroused to an appreciation of the danger which threatened her possessions and her commerce in the Pacific. In April, 1886, diplomatic arrangements were entered into between the two governments which provided that for political purposes the Western Pacific should be considered as embracing that part of the ocean lying between the 18th and 30th parallels south and between 165° west longitude and 130° east. A conventional line of demarcation between the British and German spheres of influence within the area thus defined was then laid down. This line, starting from the north-east coast of New Guinea, at a point near Mitre Rock on the 8th parallel south, runs due east to the intersection of 8° S. with 154° E. Then it bears north-east to a point south of Bougainville Island, at the intersection of 7° 15' S. with 155° 25' E. From there it is carried south-east to the south of Choiseul and Ysabel islands, and from the intersection of 8° 50' S. with 159° 50' E. it holds due north-east to the south-east corner of the Marshall Islands, where it turns directly north, running to 15° N.

East, south-east, or south of this line Germany engaged not to acquire land, accept protectorates, or interfere in the extension of British influence, also to give up all territory acquired and all protectorates established in that part of the Pacific.

It was, however, especially stipulated that these arrangements should not apply to the Samoan group, which was affected by treaties with Great Britain, Germany, and the United States, nor to Tonga, also affected by treaties between Great Britain and Germany; nor to the island of Niué (Savage Island),—which groups were to continue to form a neutral region; nor to any island or places in the Western Pacific at that time under the sovereignty or protection of any other civilized power. This last proviso was a most important one. In Samoa or the Navigators' Islands, Apia had been since 1879 under a municipality directed by the consuls of Germany, Great Britain, and the United States. The United States had control of Pangopango, a harbor of great importance as a naval station, the Germans virtually possessed Saluafata, another excellent port, and they also had a practical hold on Apia; the land around Sanga harbor was likewise mortgaged to them. The determination of the

¹ The kernel of the cocoa-nut cut into small pieces, and dried in the sun.

Germanans to forcibly annex Samoa led to troubles that were not adjusted until 1889, when a conference of the three powers interested was held in Berlin and an act was signed by them guaranteeing the neutrality of the islands. The citizens of the respective powers have equal rights of residence, trade, and personal protection. The independence of the Samoan government is recognized, the Samoans having the right to elect their king and govern themselves in accordance with native laws and customs. Future alienation of lands is prohibited, except in certain specified cases, and a local administration is provided for Apia.

After the signing of the protocol between Germany and England by which the area of German aggressions was limited as stated above, the Berlin government turned its attention to the Carolines and Pelews, which lay within the German sphere of influence; and the Spaniards who had for two centuries included among their dependencies the *Marianas*, *Carolinas*, and *Palaos*, but who had never taken actual possession of them, were suddenly roused out of their torpor by the arrival of a German gunboat and the unfurling of the German flag on the island of Yap. There was talk of war at Madrid; but the difficulty was at length referred to the Pope for arbitration, who found that the Spaniards had done more for the civilization of the archipelagoes than any other nation; but he at the same time pointed out that, though the Spaniards laid claim to the sovereignty over the islands, both the German and British governments had formally declared in 1875 that they did not recognize such a claim. A treaty was signed at Rome, October 22, 1875, by which it was agreed that the German government should recognize Spain's priority of occupation and sovereign rights over all the islands between the equator and the 11th parallel N., and between 133° and 164° E. At the same time Spain was to grant German subjects full freedom of trade, navigation, and fishing, with the right of forming plantations. And the German government was to be allowed to establish a naval station or coaling station on one of the Carolines or Pelews.

A few days previous to the signing of this treaty the German flag had been hoisted at Jaluit, on one of the Marshall group, where Germans have almost a monopoly of the trade.

In 1886, Germany pledged herself to do nothing which might hinder France from eventually taking into her possession the isles and islets connected with the Society Islands. She also entered into the same engagement with reference to the New Hebrides Archipelago, which lies not far from the French island of New Caledonia. The specification of the New Hebrides at once stirred the Australians; they fear any farther extension of French influence in the neighborhood of New Caledonia, and are determined to prevent the establishment of more penal stations in their vicinity from which criminals can escape and settle on their territory. The French government officially disowned any intention to take possession of the New Hebrides, but, under pretext of avenging outrages and reputed massacres, in spite of diplomatic protest and in violation of treaty obligations, the tricolor flag floated over the New Hebrides, and French troops were quartered on the islands until March, 1888.

During 1886, Germany also annexed Bougainville, Choiseul, and Ysabel in the Solomon Archipelago. All three lie within the German sphere of influence.

During 1887, France established a protectorate over the Wallis Islands and the Fotunas, west of Samoa, and in 1888 over Raiatea, not far from Tahiti.

In 1888, Great Britain proclaimed a formal protectorate over the State of North

Borneo ; the neighboring territories of Brunei and Sarawak were also placed under British protection. Christmas Island was added to the Straits Settlements in 1889.

To sum up, the principal Micronesian islands (using the term in its broader sense) are at present distributed as follows : The Marianas, Spanish ; the Carolines and Pelews, Spanish ; the Marshall Islands, under German protection ; the Gilbert Archipelago, independent, but within British sphere of influence ; the Ellice Islands, within British sphere of influence ; Solomon Islands, divided by the sphere of influence, line between England and Germany ; on the German side, Bougainville, Bourka, Choiseul, and Ysabel ; on the British, Treasury Island, Malayta, Guadalcanal, New Georgia, and San Christoval ; Santa Cruz Islands, independent, but within British sphere of influence ; New Hebrides, independent ; New Caledonia, Isle of Pines, and Loyalty Islands, French ; the Fiji Islands, British ; Samoa, independent ; Tonga or the Friendly Islands, independent, though seeking British protection ; Cook Islands, under British protection ; Hawaiian Islands, independent ; Society Islands, partly independent, partly French (see pages 892-894) ; Marquesas Archipelago, French ; Tubuai, French ; Oparo, French ; Low Archipelago (Tuamotu), French ; Gambier Islands, French ; Easter Island, independent.

M. A. H.

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